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The Birds of Pembrokeshire and its Islands.



ROCKS AND ISLANDS AT THE SOUTH END OF RAMSEY ISLAND.

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THE
BIRDS OF PEMBROKESHIRE
AND ITS ISLANDS.

BY

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ONE OF THE AUTHORS OF THE "BIRDS OF DEVON."



W tyn Dwy a fydd.

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PREFACE.

HAVING been compelled to resign the living of Bishop's Lydeard, in West Somerset, in consequence of long continued ill health, we were induced to settle in North Pembrokeshire on account of the healthiness of the climate; and were further led to select this remote part of the kingdom through anticipations of the sport to be enjoyed by its trout streams and on its moors. A time entirely given over to open-air pursuits was recommended as the best course to be adopted for the recovery of health, and we are thankful to state that this pleasant prescription met with entire success. Much of our eight years' residence in the county, which was not without its clerical duties, as we became curate of our small parish, was devoted to a study of its birds. All the noted bird resorts were visited, as well as the various collections of stuffed birds we could hear of within the county; while from numerous sporting friends, and from others with a taste for natural history, whatever information they were able to impart was sought after and noted down. We now present the result; although meagre, it may serve as the foundation upon which an ampler account of the birds of the county may some day be based.

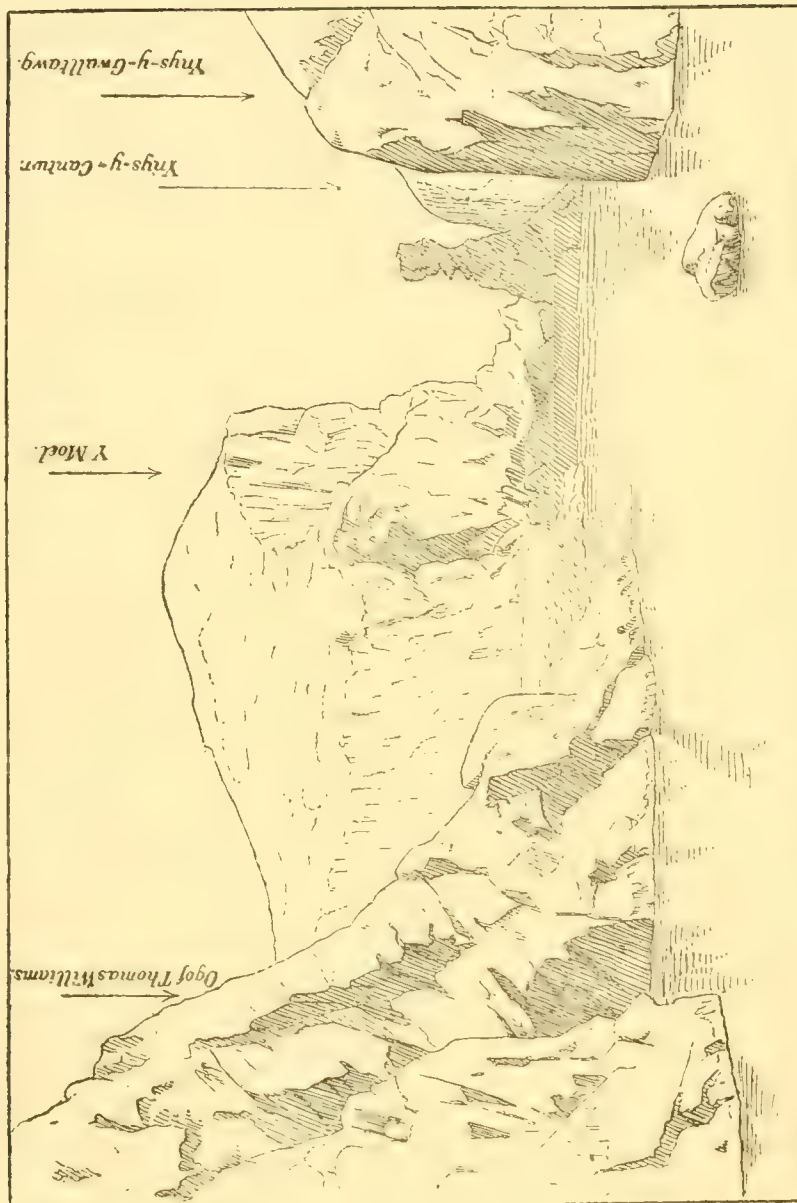
Buckland Dinham, 1894.

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ROCKS AT SOUTH END OF RAMSEY ISLAND.

KEY TO FRONTISPIECE.

South end of Ramsey Island.

1.—*Ogof Thomas Williams, i.e.*, the Cave of Thomas Williams. Just here is shewn the entrance to the cave; it is much frequented by Guillemots and Kittiwakes. A little further round is a favourite Seal cave.

2.—*Y Moel, i.e.*, the Conical Hill. This is the south end of Ramsey; it is a lofty cliff, at whose base is a rocky and pebbly beach, and between it and *Ynys-y-Cantwr (i.e.*, the isle of the Singer) there is a dangerous race of the tide, known as *Twll-y-Gwyddel (i.e.*, the Irishman's Hole); on the other side of the *Cantwr* is *Twll-y-dylan (i.e.*, the Hole of the Ocean), the gorge through which one passes. The little upright rock in the middle has no particular name; a boy fell off it about four years ago and fractured his skull.

3.—*Ynys-y-Cantwr*. This is a round grassy islet on the side next to *Twll-y-dylan*, and has a fine Seal cave.

4.—*Ynys-y-Gwalltawg (i.e.*, the Hairy Island), a lofty, round islet with a grassy top, the abode of a large colony of Gulls its sides are well patronised by Guillemots and Razorbills.

INTRODUCTION.

I.—MATERIALS.

MATERIALS for compiling a book on the "Birds of Pembroke-shire" are scanty. The inhabitants of the county, and of the Principality in general, are open to the charge, at least in bye-gone years, that they were *incuriosi suorum*, indifferent to the Fauna by which they were surrounded. There are no Welsh ornithologists, so far as we are aware, who lived earlier than the present century. It remained for a stranger like Drayton, in his "Polyolbion," to describe the noble race of Falcons that were to be found upon the rocky Pembroke-shire coasts. In an old map of the last century hanging up in one of the rooms of the county club in Haverfordwest there are some quaint marginal notes descriptive of the local curiosities, and among these the salmon leap below Kilgerran Castle, and the Falcons to be found on St. David's Head are specified. In his gossiping history of the county Fenton does not wander into the fields of Natural History beyond expressing his wonder at the vast multitudes of "Eligoogs" (common Guillemots) and other sea-fowl to be met with in the St. David's district. Coming to later years, we have in the *Zoologist* for 1850 and 1851, "A Catalogue of Birds taken in Pembroke-shire; with Observations on their Habits, Manners, &c., by Mr. James Tracy." These consist of notes, some of them excellent, that were supplied to Lord Emlyn, and by him communicated to the *Zoologist* for 1850 and 1851. Mr. Tracy was for many years (c. 1840—1860) a bird-stuffer at Pembroke, whose father was one of Lord Cawdor's keepers at Stackpole. He was able to record one or two birds that may be considered classical, as they afforded subjects for the beautiful illustrations in Mr. Yarrell's "British Birds." Such are the young Greenland Falcon, shot on a warren of Lord Cawdor's at Stackpole; the Yellow-billed American

Cuckoo, also from Stackpole, both illustrated in Mr. Yarrell's well-known work ; and the Red-Crested Pochard ; all three were presented by Lord Cawdor to the Zoological Society of London, and may still be seen in the Gallery of British Birds, at the Natural History Museum at South Kensington. Unfortunately, Mr. Tracy's notes are incomplete, and do not extend beyond the Sandpipers and Plovers.¹ In the *Zoologist* for 1866 and 1869 are contained the valuable notes on the birds observed by Mr. Thomas Dix in the north-eastern corner of the county, on the Cardiganshire borders, which serve to illustrate the influence exercised by the Precelly Mountains on the distribution of birds in Pembrokeshire. Mr. Thomas Dix was born in 1830, at Dicklebury, near Harleston, in Norfolk, and was a friend of such well-known naturalists as Mr. Henry Doubleday, of Epping, of Mr. Edward Newman, the founder and editor for many years until his death, of the *Zoologist*, and was also a friend and correspondent of Mr. H. Stevenson, of Norwich, the author of the "Birds of Norfolk." He was himself an accomplished and observant naturalist, and an excellent taxidermist. He was appointed agent to the Kilwendeage estate, in North Pembrokeshire, and this brought him into the county, and enabled him to interest himself in its natural history. His notes are full of value, and evince close and accurate observation. His death, at the early age of 42, can only be considered as a serious loss to the naturalists of the county. There is a memoir of him in the *Zoologist* for 1873, from the pen of his friend, Mr. H. Stevenson, of Norwich. We know of only one other published account of Pembrokeshire birds, and this is a most able paper on the rarer birds of the county, from the pen of our friend, the Rev. C. M. Phelps, Vicar of St. Martin's, Haverfordwest. Mr. Phelps was, for many years, Curate of Tenby, and while he was residing at that beautiful watering-place, wrote a paper for one of the meetings of the Pembrokeshire Field Naturalists' Club, which he subsequently allowed to be printed in the seventh edition of Mason's "Guide to Tenby," an excellent and most useful volume, full of information. Mr. Phelps is an enthusiastic oologist ; and his expe-

¹ But he supplied much information subsequently to Mr. Dix, respecting the omitted Gulls and Divers.

riences are chiefly connected with the various nests he had himself detected. We have made free use of his valuable paper in our work.

We must now mention those friends, sportsmen and naturalists within the county, from whom we have been privileged to receive assistance and information. First and foremost of these we rank the late Mr. William Fortune, of Leweston. To quote Mr. Phelps's words: "At a period when natural history was all but unknown in this remote part of Wales, he worked away single-handed at ornithology, oology, entomology, our wild mammalia and reptiles, together with ferns and sea-weeds." When we took up our abode at Stone Hall, which was within a walk of Leweston, we soon formed Mr. Fortune's acquaintance. This was only two years before his lamented death, and he was then a very old man, very deaf, and rather infirm, but still a keen and successful salmon fisher. We paid him many visits, and had the pleasure of examining his beautiful collections, the birds all shot and mounted by himself in life-like attitudes. At his death the greater part of his birds was presented to the Literary Institute in Haverfordwest, and some of the rarities were purchased for the Tenby Museum. Among these was a beautiful group of a pair of Montagu's Harriers with their young in down, that had been secured on Leweston Mountain. The late Mr. John Stokes, of Cuffern, a near neighbour and great friend of Mr. Fortune's, was another excellent sportsman and field naturalist, from whom we received much information respecting the rare birds that had been observed by him on his picturesque estate. From Sir Hugh Owen, Bt., we have received a list of all the rarer birds he has met with during his long career as a sportsman, most of them having fallen to his unerring gun, chiefly in the neighbourhood of Fishguard and Goodwick. Mr. Henry Mathias, of Haverfordwest, also furnished us with a list of county birds, adding his experiences as a collector for many years. We are indebted to him for much information supplied both *vivâ voce* and in correspondence. His collection of birds was presented by him to the Museum at Tenby. For the district around St. David's we have to thank our friend and correspondent, Mr. Mortimer Propert, for supplying us with many valuable notes. Mr. Propert, together with

his father, Dr. Propert, and his brother, the Rev. Sydney Propert, has formed a very beautiful collection of birds' eggs, all obtained around St. David's, and on the islands of Ramsey and Grasholm, the Bishop's Rock, &c. These are chiefly sea-birds' eggs. The series of Guillemots' eggs is hardly to be surpassed in any private collection ; and there are some very fine and handsome specimens of the eggs of the Chough, Raven, Common Buzzard, Peregrine, &c., &c. There are no very important collections of birds in the county. We have already mentioned those of Mr. Fortune, and Mr. Mathias, and we have only one other to describe, and this, perhaps, the most interesting of the three, is that in the possession of Lord Cawdor, at Stackpole. Although several of the rarest of the birds were long ago presented, as we have already related, to the National Collection, yet there are many scarce and valuable birds still preserved in it. Most of the birds were shot on the Stackpole estate, and were set up by Mr. James Tracy, of Pembroke. We were allowed the privilege of inspecting this interesting collection, and were at the time furnished by Lord Cawdor with particulars respecting the capture of some of the rarest of the birds. We have been informed that there is also a collection of birds at Slebech, the seat of Baron de Rützen, but we have not seen it, and consequently are unable to state what it contains. The Rev. Clennell Wilkinson, Rector of Castle Martin, and for some time President of the Pembrokeshire Field Naturalists' Club, gave us much information respecting the birds of the Castle Martin district, and we had the pleasure of visiting the celebrated Stack Rocks in his company. We are indebted to many friends, too numerous to mention, for delightful days of sport over the romantic covers of North Pembrokeshire ; thus giving us the opportunity of rambling, gun in hand, over some of the wildest portions of the county, and of observing the birds that frequented them, and we must, while thus recording our thanks, pay a tribute of gratitude to our old friend, the late Colonel John Owen, of Rosebush, through whose kindness we participated in many a good Woodcock shoot at beautiful Trecwn, and in the wild covers adjoining the Tufton Arms.

We must not forget to record our indebtedness to Mr. Frederick

Jeffreys, the bird-stuffer in Bridge Street, Haverfordwest, who has now for several years sent us information of every rare bird that has come into his hands. Mr. Charles Jefferys, naturalist, of Tenby, has supplied us with many valuable and interesting notes respecting the birds to be found in his neighbourhood, and also on Caldy Island, almost the only one of the beautiful Pembrokeshire islands we have not ourselves visited. In the National Collection of British Birds at South Kensington there are many labelled as having been the gift of the Rev. A. Morgan. This was the late Chancellor Morgan, of Machen, Monmouthshire, uncle to Sir Hugh Owen, to whose gun most, if not all, of these specimens were due. Our thanks must be given also to Dr. Propert, of St. Davids, who has kindly assisted us in compiling our account of the various Pembrokeshire islands, correcting what we had written, and adding some interesting matter from his own extended experience.

II.—PHYSICAL GEOGRAPHY.

Pembrokeshire is one of the smaller Welsh counties, and is exceeded in area by nearly all the English counties, Bedford, Huntingdon, Rutland, and Middlesex excepted. It occupies the south-westerly portion of the Principality, and is bounded on the north-east by Cardiganshire, on the north, north-west and west by the St. George's Channel, on the south by the Bristol Channel, and on the east by Carmarthenshire and Carmarthen Bay. It lies between $51^{\circ} 36'$, and $52^{\circ} 7'$, N. lat., and $4^{\circ} 30'$ and $5^{\circ} 20'$ W. long. The length, from Strumble Head on the north coast to St. Gowan's Head on the south, is 31 miles. The average width from east to west barely exceeds 21 miles. The area is 628 square miles, or 401,691 acres. The chief geographical feature of the county is the extent of its sea-coast, which must exceed a hundred miles in length, owing to indentations in the form of numerous bays and estuaries. Its western shores furnish many wonderful and conspicuous examples of denudation by atmospheric and marine agencies; the hard and igneous rocks, for instance, stand out boldly on the north and south extremities of St. Bride's Bay, but the softer old red sandstone, silurian, and coal measure strata lying between them have been weathered by the

atmosphere, and worn back by the ceaseless beating of the ocean waves, so as to form the picturesque bay which now commands our admiration. The same influences account for the multitude of beautiful islands that stud the coast. We propose to treat of the chief of them in some detail further on. Pembrokeshire possesses numerous streams wherein trout are abundant, and also sewin (*salmo cambricus*), the latter being known only within the borders of the United Kingdom, in the streams and rivers of Wales, Devonshire, Cornwall, and Ireland. It is exceedingly well watered, also, by numerous springs, but it is without any important river. The Eastern Cleddau and the Western Cleddau, uniting at Landshipping, broaden out into the noble estuary of Milford Haven, and alone are entitled to the name of river, while the Nevern, and Gwaen, in the north of the county, each flowing through a beautiful, wooded valley to the sea, are well known for the excellent sport they afford the fly fisher, and are the only other streams of sufficient importance for mention. The climate of Pembrokeshire is, as may naturally be expected, mild and humid, when it is stated that the prevalent winds are from the south-westward, and right over the sea where the Gulf Stream flows. The rainfall, too, is sometimes excessive. We are informed by a writer of authority that the annual rainfall of the county varies from about 31 to 40 inches, and may be averaged at about 36 inches. These figures are possibly quite correct if the observations of a long series of years be taken. We have, however, for the sake of comparison, taken the daily records of measurements of rainfall in ten different parts of the county for the comparatively short period of ten years; that is, from 1881 to 1890 inclusive, and we find the annual average of these ten years to be 43 inches, the highest annual average, 59 inches, occurring in 1882, and the lowest, 30 inches, in 1887. But in spite of these drawbacks the air, a delightful compound of sea and mountain breezes, is fairly bracing, and in fine weather the skies appear to be bluer than they are in England. The surface of the county is diversified by hill and dale, and the soil varies in quality according to its locality. The anthracite coal measures extend from St. Bride's Bay due eastward to Carmarthen Bay, and seem to divide the county into two unequal parts, differing

from each other in many particulars. In the southern portion the soils afforded by the carboniferous limestone and old red sandstone are of good quality, and the farms on Lord Cawdor's estate in Castle Martin and the adjoining parishes may vie in excellence and fertility with any in the kingdom. This district is celebrated for a compact and hardy race of pure black cattle, which has been long known and highly prized as the "Castle Martin breed." Horses, too, of the "Pembrokeshire breed," find their home here, and are often sent away into the English markets. The soil of the coal districts is very poor, but there is some improvement to the northward, and all along the coast line it is eminently suited to the cultivation of barley, the crops produced in the neighbourhood of St. David's obtaining high prices for malting purposes. The northern part of the county is chiefly composed of "mountain," *i.e.*, barren, uncultivated ground, covered with furze and heather, with occasional parcels of good alluvial land in the valleys. The lofty Precelly Mountains, that form the chief watershed, are drawn zigzag across from the northern coast south-eastward through the heart of the county, cutting off a small portion on the Cardigan side. Their loftiest peaks, Foel Eryr and Foel Cwm Cerfwyn, rise 1,700 feet above the sea-level. The latter is marked on the ordnance map as 1,758 feet, and is surmounted by a cairn and flag-staff. These beautiful hills materially affect the distribution of the summer migrants in the county. On their north-eastern, or Cardigan side, the Redstart, Garden Warbler, Wood Wren, and Wryneck are all to be noted, whereas, on their western side, and in the central and southern portions of the county, these birds are either entirely unknown, or but very rarely seen. The coast on the north of the county is more lofty and precipitous than it is in the south, where sandhills and warrens, or ivy-covered cliffs of inconsiderable altitude make up the sea front. Following the coast from the northern boundary of the county from Cardigan Bar at the mouth of the Teifi, a noble salmon river that forms the north-eastern boundary for some distance, we meet with a succession of bays, and lofty promontories. First comes Newport Bay, bounded on the south-west by the bold and rocky Dinas Head; then follows Fishguard Bay, with the sands and oozes of Goodwick. To the

west of Fishguard Bay rises the grand promontory of Pen Caer, a mass of trap and granite, attaining the height of 800 feet above the sea, and visible from almost every part of the county, appearing at a distance like vast fortifications and castles.¹ Here, too, is Strumble Head. Continuing the rocky and lofty coast, in which wooded valleys, each with its little stream, make an occasional inlet, we next reach St. David's Head, forming, with Ramsey Island, the northern point of the grand crescent of St. Bride's Bay, the island of Skomer constituting the southern point. Looking down upon St. Bride's Bay from the high ground above it, from the top of Cuffern Mountain, for instance, we have a glorious scene. Its islands, Ramsey and Skomer, to the north and south, with Grasholm some fifteen miles from the shore out in the centre of the bay, and many another small rocky islet close in shore, afford points to catch the shifting lights, here dark with passing clouds, there bathed in sunshine, the deep green waters of the bay shining like a mirror. Bordering on St. Bride's Bay are the extensive Newgale Sands, to the north of them the romantic little port of Solva is cut out in a deep fissure between the cliffs, and stands on its tiny stream. Southwards are the favourite watering-places of Broad and Little Haven, with their sandy shores, and then we turn the promontory to the south, where the famous estuary of Milford Haven broadens out beyond St. Ann's Head. To the east of Milford Haven succeeds a tamer coast, much indented, and with many a "point" or "head" projecting southwards into the Bristol Channel. Soon after turning Linney Head eastwards we reach the well-known "Stacks," famous in the summer for their hosts of cliff birds. Then, after rounding Lord Cawdor's beautiful park at Stackpole, we soon arrive at Tenby, with Caldy Island fronting it to the south-west; and then a mile or two brings us to the boundary of the county, to Marros Sands and the Laugharne Marshes in Carmarthenshire. The general character of Pembrokeshire is bare and wind-swept; the few trees on the high grounds are all bent towards the east by the prevailing westerly winds; and, although in many parts of the county there are some fine

¹ Pen Caer—the Castle Hill.

and extensive woodlands, yet from their being situated chiefly in deep valleys, these seldom catch the eye until they are closely approached, and so do not take away from the universal treeless appearance of the landscape. And when they are entered they will be found to contain no lofty forest trees; there are none in the county, except at Picton Castle, where in the grounds there is some fine timber; the Pembrokeshire trees in general are of no height or size, and are chiefly the ash, oak, sycamore, alder, and beech. The elm is very rare, especially in the north of the county; plantations of larch, spruce, and hazel thrive, and grow rapidly; the soil of the county is excellently suited to the rhododendron that affords a favourite cover to pheasants and woodcocks, and attains, as at Trecwn, a gigantic size in its lofty and wide-circling clumps. Hedges and hedgerow timber, are almost entirely absent; the fields are fenced by banks constructed of stones and turfs, which afford but slight restraint to the active little black cattle, that leap them at will like deer, and are commonly to be encountered straying far from their pastures. In many places lofty masses of trap rock crop out from the ground, rising up like islands; some of these are castellated, others are of grotesque shape, such as the well-known "Lion" rock at Treffgarne, that resembles a couchant lion, a conspicuous object at a great distance, and visible from almost every part of the county, like Roch Castle, a ruin standing on a rocky eminence about a mile inland from St. Bride's Bay, that also forms a point not to be avoided in the landscape. Many of these isolated rocks afford nesting sites to Buzzards, White Owls, Kestrels, Jackdaws, and Starlings. Although we were, on the whole, much disappointed with the *Ornis* of the county; its native birds being but few in number, and only one or two of the species abundant; and its visitors—considering the great extent of its diversified coast, that trends so far into the sea towards the south and south-west that it might well be expected to attract passing birds—being but few and scanty; yet, from our experience, we found it a delightful county to reside in; its people, in every class, are most friendly and hospitable; and the sport, in its bright and rapid trout-streams, on its furze-clad "mountains," and in its swampy covers, quite sufficient to give pleasure and content-

ment to any reasonable sportsman. We ascribe the paucity of its birds to the Precelly Mountains barring the entrance of some species, as we have already pointed out; and from studying the reports received by a Committee of the British Association from the lighthouses and light-ships around the coast of the various birds that strike against their lanterns at the great annual migration periods in the spring and autumn, we have concluded that there is evidence in them that numerous birds, in their movements from south to north, or from east to west and *vice versâ*, as they go to and fro over the St. George's and Bristol Channels, only skirt the shores of Pembrokeshire, and of South Wales in general, and seldom visit us. Mr. J. H. Salter, of University College, Aberystwyth, has informed us that he has experienced the same disappointment with respect to the birds of Cardiganshire. Coming into that county from Norfolk, which is famous for the abundance and variety of the ducks and waders upon its coasts and "broads," he was struck by the absence of Sandpipers upon the shores, and by the general scarcity of bird life.

III.—THE ISLANDS.

Were it not for the islands off the coast there would be little to write about the Birds of Pembrokeshire, but these are, in the summer time, when the various cliff birds resort to them to nest, so thronged with countless birds, that they serve to redeem the county from the charge we have had elsewhere to bring against it of being, comparatively, uninteresting to the ornithologist, and also afford a justification for our book, which, without them, we should have felt no incentive to compile. Anyone who has ever visited these beautiful islands, especially in bright summer weather, cannot fail to have been impressed with the scenes presented to him, which will for ever live in his memory. The most important of them in size, and in extent of bird population, are Ramsey, Grasholm, Skomer, Skokholm, and Caldy. Besides these there are various others, satellites of the larger islands, or rocky islets and "stacks," more or less distant from the coast, such as the Bishops' Rocks, where the Greater Black-backed Gull, the Sea-Pie, &c., nest; Skokholm Stack, tenanted by a colony of the Common Tern; the "Eligoog Stacks," off



ROCKS AND ISLANDS AT THE SOUTH END OF RAMSEY ISLAND.

the coast to the south of Pembroke; St. Margaret's Isle, connected at low water with Caldy, &c., &c., and the Midland, a small island, yet sufficiently large to afford summer pasture to sheep, between Skomer and the coast. The Danish names of all the islands indicate their former occupation by the Danes, who had besides various settlements upon the sea board of the county.

Ramsey—Danish, the "Strong Island."

Taking the islands in order from the north, we have first to describe the one that, in our opinion, is the most picturesque in its rocky scenery, and the brightest in its summer garb of flowers, beautiful Ramsey. To anyone approaching it by land, as he draws near to St. David's, its lofty central peaks seem to be the boundary of the coast, but he will find that they are separated by a channel two miles in width, Ramsey Sound, which he will have to cross, embarking at the life-boat station, the little harbour of Portstinnan. Little would he imagine that this now quiet and deserted spot was once thronged with numerous ships, and was an important port in the time of the occupation of Britain by the Romans, to whom Menævia, as they called St. David's and its adjacent peninsula, was one of their chief stations, to which two of their great military roads converged from the eastern side of the kingdom. The passage across to the island is usually more easily accomplished than the return, for on the calmest summer's day we have known a brisk offshore breeze suddenly to arise in the afternoon, and then, as the tide always runs with tremendous force in the Sound, and the numerous rocks below the water cause countless eddies and back currents with broken water, locally termed "shots," a choppy sea immediately springs up, and the row back will be long and arduous, and accompanied by a good wetting. The island was formerly part of the great estates attached to the See of St. David's, and is occupied partly as a farm, 200 acres being under cultivation. But the chief produce are rabbits that are sent to central markets. There is a remarkable absence of any reptiles or vermin, excepting rats, which abound, and have been known to make raids upon the eggs of the

sea birds on the cliffs. Ramsey is about two miles long from north to south, by a mile wide, and there is a solitary farmhouse upon it. Its bright contrasted colours in the summer time make it a scene of great beauty, and these colours are due to the sea-weeds that girt the bases of the cliffs, to the varied tints of the rocks, and, not the least, to the ferns and flowers with which the cliffs are decked from their summits to the water's edge. Nor must we omit to mention the flecks of white which are dotted about everywhere by the pure-plumaged birds. On the summits, and on the shelves of the cliffs, the sea-thrift (*Statice*) will have its cushions of pink flowers, to be replaced, later on, by the more brilliant tints of the heather blooms. Growing in tangles among the ferns and heath are the briars of a very sweet-scented pure white rose¹ (*Rosa spinosissima*), whose flowers vie in purity with those of the sea champions (*Silene maritima*), and give an appearance in many places as if the cliffs were sprinkled with snow. Great patches of fern (*Asplenium marinum*, and more rarely *Asplenium lanceolatum*) crop out from sheltered niches, and form, in many cases, the beautiful roofs of numerous caves, which are the home of the seal and its companions. Rows of freckled bells of the foxglove (*Digitalis purpureus*), whose spikes are particularly long and handsome, now purple, now white, here and there gracefully wave their drooping heads, while the Cambrian rocks are profusely splashed with the bright orange lichens that are so familiar in Mr. Brett's charming landscapes of the Cornish coast. The cliffs themselves are many coloured, here coal black, here dark grey, and where the waves lap their bases are rimmed with coral-red sea-weeds. The intense blue of the sky overhead, and the glinting green sea-water beneath, are an appropriate colour-setting to the brilliant picture. At the south-west end of the island the cliffs are more varied in form, and are more deeply honey-combed by the waves than they are at the north, and some fantastic rocky islets are close in shore. Two of these are known as *Ynys-y-Cantwr* and *Ynys-bery*, and are separated by a narrow gorge, called *Twll-y-dillyn*, just wide enough for a boat under oars to pass, through which the tide races with

¹ Also very common, as Dr. Propert informs us, on the Burrows, and in some of the valleys of the adjoining mainland.

great velocity, so as to render the passage, except in the finest weather, somewhat dangerous. On getting through, the bay of *Dillyn* is reached, and is found to be nearly surrounded by towering precipices, presenting, on a bright day, a scene of beauty and grandeur rarely to be met with. Here the Guillemots and the Razorbills chiefly congregate, and are also numerous on the westward face of the island, where are some fine cliffs, particularly *Allt-felyn-fawr*, and *Allt-felyn-fach*, towering sheer and perpendicular over the sea dashing against them beneath; and here are placed numerous nests of the pretty Kittiwakes, that seem to cling, like Martins' nests, to the least attachment provided by any ledge or niche. Here, too, the Shags have their malodorous abodes, with Herring Gulls and countless Jackdaws, while the nests of the Peregrine and Raven have also been taken on their lofty crags. At the north end of the island is a colony of Puffins that on Ramsey seem anxious to keep themselves distinct from the great concourse of other birds, and here, too, in the cliffs are numerous caves, in which Choughs and Pigeons build, the latter, probably, a mixed company of Stock Doves, escaped farm-yard Pigeons, and Rock Doves. Mr. Mortimer Propert, of St. David's, our friend and authority for the birds of Ramsey and the St. David's Peninsula, assures us that he is pretty confident that he has identified Rock Doves among the Ramsey Pigeons. The visitor to Ramsey will not be long upon the island before he will recognise a pair of Ravens, and hear their hoarse croaking challenge. He will also probably see Buzzards, Peregrines, and Kestrels. When we were upon the island we remember that we knelt upon the top of the cliff to look over into a Buzzard's nest that was only some twenty feet below. A few Sea-Pies nest upon the island, and there are various small birds, such as Rock and Meadow Pipits, Stone Chats, &c., tenanted it, and we started a Blackbird near the farm. Besides the birds we have already mentioned, the Lesser Black-backed Gull nests on the slopes of the cliffs, at their summits; a pair of Greater Black-backed Gulls have nested occasionally on the extreme top of *Ynys-y-bery*, and Cormorants breed in about equal numbers with Shags. We have seen little parties of Manx Shearwaters flying over Ramsey Sound, and it is possible that a few may nest upon the island.

We have been very fortunate to obtain from Mr. H. B. Wimbush permission to take a photograph of one of his sketches of Ramsey for the frontispiece to our volume, which gives a very faithful rendering of the peculiar shapes of the rocks at the south-west end. We wished at first to have reproduced the sketch as a chromo-lithograph, being anxious to give some representation of the brilliant colouring that is so marked a feature of the island, but were deterred by the cost, as well as by the fear of disappointment and failure in the result, and must hope, therefore, that after the description we have attempted above of the varied hues that deck beautiful kaleidoscopic Ramsey, our readers may be capable of supplying them for themselves. Mr. Wimbush paints the rocky coasts of the St. David's headland, and of Ramsey, with a most loving and appreciative brush, as he was himself educated at St. David's by Dr. Propert, and went egging oftentimes on Ramsey in company with the Doctor's two sons, the Rev. Sydney and Mr. Mortimer Propert, when all three used often to risk their lives, when boys, in dangling by a rope over its dangerous cliffs while collecting the eggs of the Peregrine, Buzzard, and Raven, and those of the Guillemot and other cliff-birds upon their ledges. We have been privileged to see some charming drawings of the St. David's coast in Mr. Wimbush's studio at Finchley, in which every detail in the cliffs, every rock and pebble on the beach below, the sandy shore with its rippling fringe of waves, are rendered with an exquisite fidelity, the result being a combined sea and landscape of great beauty and artistic power. The cliff-birds' eggs from Ramsey are finely-marked specimens. Curious and handsome varieties of the eggs of the Guillemot, Razorbill, and Kittiwake may be obtained. Any visitor to St. David's who is at all an oologist ought not to fail to request permission—sure to be courteously granted—to inspect the wonderful series of eggs in Dr. Propert's cabinet, all of them taken by the Doctor and his sons on Ramsey, Grasholm, and the Bishop's Rocks. We ourselves possess some beautiful eggs of the various Ramsey birds, including those of the Chough, Common Buzzard, Sea-Pie, and Greater Black-backed Gull, the last from the Bishop's Rocks, and are, in particular, proud of our varieties of the eggs of the Kittiwake. We have also egg

ascribed to the Rock Dove from Ramsey, but as we could not be certain as to their identification, have not ventured to place them in our cabinet.

The rocky islets in the neighbourhood of Ramsey require to be briefly mentioned, as they are all tenanted by numerous sea-birds. About four miles to the westward of St. David's Head lie the North Bishops, consisting of a good-sized grass-topped rock, and several smaller rocks, with passages between. On these may be found all the commoner sea-birds, and on the larger rock there is an abundance of Puffins, and some Greater Black-backed Gulls. To the southward of these rocks, at a distance of about two miles, is Careg-Rhosson, a cluster of rocks very like the North Bishops in character, consisting of one large rock covered with grass, and surrounded by smaller rocks with deep water channels between them, through which a strong tideway runs. These also are well patronized by sea-birds, and contain, perhaps, the largest colony of Greater Black-backed Gulls. These rocks are about three miles to the westward of the north end of Ramsey. Next to Careg-Rhosson comes the Daufraich, or Dyfich, about a mile to the south, a rocky islet inhabited by Guillemots, and a few Razorbills; and to the south-westward, again, about a mile distant, stands the South Bishop, upon which a fine lighthouse is erected. No birds breed on this rock, but many pass it on migration, numbers frequently dashing against the light. There are several smaller rocks between the Bishops and Ramsey that make the coast dangerous, and the strong tides very often occasion high seas.

Grasholm, Danish "Græsholm," the "Green Island."

On looking at a map of Pembrokeshire it will be observed that the most westerly part of the county, on the north, is occupied by Ramsey Island, and that on the south by Skomer Island; from a line joining these two islands, St. Bride's Bay runs inward towards the east for about eight miles, the coast line forming about three-fourths of a complete circle, Newgale Sands lying at the north-eastern extremity of the bay. From the northern end of these sands, not far from Newgale Bridge, there is an extensive sea view, the

central part of which is occupied by several islands, varying in size and appearance, the most important of them being the one nearest to the observer, distant about fifteen miles, known as Grasholm, and the one farthest from him, distant about twenty-one miles, distinguished, as may be observed in fine clear weather, by a slender, tall, pointed tower, known as the Smalls Lighthouse.

The geographical position of these islands may perhaps be more accurately described by saying that they lie almost in a straight line bearing west-three-quarters-north from Skomer Island. The distance from Skomer to Grasholm is six miles; on the same course, three miles farther on is a cluster of half-tide rocks called the Barrels, and from the Barrels four miles still further westward is reached the Smalls Lighthouse. About half-way between the Barrels and the Smalls lie the Hats, a group of sunken rocks, with eight feet of water over them at low tide. Around these islands and rocks, as if to make some of them still more perilous, is deep water, and between them very strong currents set, in many places forming dangerous "races." Grasholm, however, being of sufficient size, divides these currents, so that a triangular space of dead water is formed on its northern and southern sides.

From Porthclais, the seaport of St. David's, Grasholm bears south-west-by-west-three-quarters-west, and is distant from it about twelve miles. On approaching the island it appears to be more or less conical in shape; the surface slopes down from north to south, and is fairly covered with green rank grass. Seen from the north the cliff is precipitous, its top being occupied by the chief Gannet colony; on some of the ledges and in the clefts are many other nests. From the top of the cliff up to the grassy summit, all available and suitable spots are occupied by Kittiwakes and other birds. On the east side of the island, close to a half-tide rock, is a sort of cleft or cave, where, in fine weather, landing is practically easy, and on the southern side is a deep gully, forming a small natural harbour, with a shelf of rock on one side, upon which a boat can be easily hauled up. The outer, or western side, being exposed to the western ocean, is, as may be expected, the more weathered and eroded, and offers no facilities for landing. From the southern end the ascent is

easy, and on reaching the grassy part the attention is immediately arrested by the countless numbers of Puffins which come into view; these on rising and flying overhead, for the moment completely shade the sun. There are also Gulls, but not so numerous, such as the Herring Gull, the Lesser Black-backed Gull, and the Greater Black-backed Gull, and nearly all round the island the pretty and sociable Kittiwake is to be met with in large colonies, and may readily be got at; on one occasion, Mr. Mortimer D. Probert found four Kittiwake's eggs in one nest, which is an unusual occurrence, for the Kittiwake mostly lays two eggs, sometimes three, and very rarely four. Razorbills and Guillemots likewise are found in very great numbers and in close proximity to the Gannets.

The Gannets, of course, form the most attractive feature of Grasholm, which holds a conspicuous place in our account of the county Ornis, as it is the only spot off the coast of Pembrokeshire that furnishes a nesting station to these fine birds that are said to have been originally a settlement from Lundy, where they sustained such persecution from the hands of the channel pilots and other egg stealers, that many of them were driven to forsake that island in search of a more inaccessible, solitary, and peaceful residence. Here, on Grasholm, the Gannet is found at all ages and in every stage of its growth, and no sight can be more striking and impressive than the beautiful and brilliant plumage of these birds, as seen in the early morning sun, when some are sitting on their plateau and ledges, some on their nests, and others flying about fishing in pursuit of food. In addition to the main colony, where one can walk about among the nests, which are large structures, and not over savoury from the remains of decaying fish, there are on the north-west of the island two or three smaller colonies, and the total number of Gannets' nests were, in the spring of 1886, estimated by Mr. Mortimer D. Probert at two hundred and fifty, so that at that time there were upon Grasholm about five hundred breeding Gannets.

We have been fortunate in having been able to procure from Mr. C. Jefferys, of Tenby, two very interesting photographs of Grasholm, one representing the Kittiwakes on their nests close to the

landing-place, the other giving a picturesque view of some of the Gannets; the island seen to the right is merely the small rock, mentioned above, that is submerged at high water.

Skomer, Danish, "The Rocky."

Although not so gaily decked with flowers as Ramsey, Skomer is, to the ornithologist, the most interesting of all the Pembrokeshire Islands, on account of the incredible number of birds resorting to it in the summer, probably exceeding those to be found on any other island of equal size off England, Scotland, or Ireland. These multitudes are mainly composed of countless Puffins and myriads of Manx Shearwaters, the last locally known as "*Cockles*," from the grunting cry of the birds when in their holes. Skomer forms the southern horn of the crescent of St. Bride's Bay and, like Ramsey, is parted from the mainland by a narrow sound, some two miles wide, of deep water, through which the tide also rushes with great force, where there are numerous sunken rocks, so that it is rather dangerous to navigate in a small boat when there is anything like a sea, as is often the case. In area Skomer contains about 700 acres. There is but one house upon the island, a substantial dwelling; about 250 acres are in cultivation, and are excellently stocked with Partridges that, owing to the absence of rats, thrive well and afford good sport in the season. Like Ramsey, Skomer is also well supplied with numerous springs of beautiful water. Here and there large citadel-looking rocks of trap crop up, giving to the island its Danish name of Skomer, "*The Rocky*"; in their clefts numerous White Owls have their roosting places. Remains of an ancient occupation are visible in sepulchral barrows, and in the rough outlines of dwelling-places and enclosures. A conspicuous mark on the eastern side of the island is a lofty upright stone; there are several similar ones on the mainland that are said to mark victories gained by Earl Harold over the Danes. The village of Haroldston has been supposed by some to take its name from such a memorial.¹ To reach Skomer, a boat-

¹ However, the number of places in the county whose names end in the Saxon *ton* (*town*), make it probable that Haroldston is only one of them.

man has to be secured at the village of Marloes, distant some two miles from the little port of embarkation at Martin's Haven. As one crosses the sound a small island, called the Midland, has to be rounded, and then the landing place of Skomer comes in view with the water near the shore (we are supposing the visit is paid in the summer), thickly covered with birds, Puffins exceeding all the other birds in number in a vast proportion; little parties of Guillemots and Razorbills will be seen diving and fishing; and there will be numerous Gulls, some resting on the water, others flying to and fro, while single Cormorants and Shags will be noticed passing with rapid flight low over the water, occasionally alighting above some school of fish, to dive and fly after them in the green depths. No visitor to Skomer can escape being astonished at the hosts of Puffins that are dispersed all over the island, and are so tame that they hardly trouble to move out of his way. In walking, one is sure, sooner or later to find one's foot slipping through into some Puffin's burrow, to the astonishment of the bird sitting placidly upon its egg. The whole demeanour of the Puffins may be said to be placid; it is not easy either to hurry or to frighten them. Every now and then they may be seen scuttling out of their holes, making off in a ridiculous manner, with much rolling and tumbling head over heels before they can rise on wing; and unless they face the wind, or are on an eminence, Puffins are unable to fly; when these conditions are not present they can be easily captured. All along the edge of the cliff, see how thickly they are congregated; their white breasts turned towards you have the appearance of monster snow flakes. As you approach the only notice the birds will take is to fall in, in a closer order, those outside drawing together with an absurd kind of military precision until the host is drawn up upon the very scarp four or five deep. And even then, unless one advances close up to them, they will remain stolidly motionless, regarding the stranger without fear, and with much indifference out of their queer little eyes. Throw a stone at them—but this only as an experiment, and without cruel intention—and the bird near which it passes will only duck its head. As we were watching a great body of Puffins wheeling backwards and forwards over the water, we suddenly noticed one with

pure white wings that was a very conspicuous object among its companions. After a while this bird flew close to where we were seated upon a cushion of Sea Pink, and might easily have been secured had we had a gun. In the dwelling-house we were shown a pure albino Puffin that was justly considered a great rarity. The Puffins arrive upon the island, as we were informed, with great punctuality on the 1st of April, and leave it early in August. It was at the end of May when we paid our never-to-be-forgotten visit, and there were then numerous young Puffins hatched in the burrows, judging from the numbers of old birds that we saw flying in from the sea with bunches of small fish hanging like ribbands from their mandibles. In our account of the Manx Shearwater in the body of the book we have given our experiences of this interesting bird on Skomer, so need not repeat them here. All day long Herring Gulls may be observed quartering the island in their vigilant quest after young rabbits; they frequently dig them out of the stops; while the Puffins and Shearwaters are continually worrying the breeding rabbits in their earths. Since the Sea Birds' Preservation Act was passed the rabbits on Skomer have greatly fallen off in number; the annual take, which used to be 9,000, is now reduced to barely 3,000; a very serious loss to the tenant.

A grand cliff at Wick Haven, facing to the south-west, is the chief breeding station of the Guillemots, Razorbills, and Kittiwakes. Here, on the higher ledges, the two first sat row upon row, in places five and six deep, and every coign of vantage on the top of the cliff was tenanted by the inevitable Puffins. The lower ledges were occupied by countless Kittiwakes, either sitting upon, or standing close by, their nests, that, like the structures of the House Martin, seemed at a distance to be made of mud, and to be plastered against the face of the cliff. In reality they are built of sea-weed and grass, that become cemented together by the mutings of the birds. The cries of the various birds created a deafening concert; while their frequent arrivals, departures, and transits across the field of vision, had almost a bewildering effect. A little further on a colony of Lesser Black-backed Gulls had a station on the summit, and we were able to walk among their nests, some containing eggs. Choughs

and Ravens were noticed, but the absence of all Hawks occasioned surprise ; not even a Kestrel was visible. There are no Buzzards nesting any longer upon the island, but we were told that a pair of Peregrines had an eyrie there, and that Buzzards paid an occasional visit.

Skomer resembles both Ramsey and Lundy in being without bush or tree, and is, in consequence, without any attraction for the soft-billed summer migrants, the *turdidæ*, or small birds that nest in leafy shelters. The short-eared Owl occasionally remains to breed ; the Rev. C. M. Phelps possesses an egg taken from a nest upon the ground. A few Curlews, Peewits, and Sea-Pies nest upon the island ; we found the last with young just out of the egg among the sprouting bracken ; we also disturbed a single Whimbrel, that started up at our feet, and ran off slowly with trailing wings as if it had a nest. Other birds on the island are Wheatears, Rock and Meadow Pipits ; Storm Petrels that nest in the chinks of an old wall above the cliff ; Carrion Crows, Jackdaws, Cormorants, and Shags.

The cliffs of Skomer present a great variety of colours, in this resembling those of Ramsey. At places they are coal black—this is at their base where they vividly contrast with the green sea-water and sea-weeds of coral and other hues ; higher up are larger masses of deep orange, while patches of brown and grey, of different shades, are also intermingled. Seals frequent the caves in all the Pembrokeshire islands, and are often to be seen.

About four miles to the south-west of Skomer is the smaller island of Skokholm, “the rocky islet,” of about 200 acres, which is held with Skomer, and affords summer pasturage for sheep ; there is no house upon it. It rises to a considerable elevation above the sea, and, like Skomer, abounds in cliff birds ; and is tenanted by numerous Manx Shearwaters, and by great numbers of rabbits. To the east is a small island called Skokholm Stack, where there is a little colony of Common Terns. At the time when the Roseate Tern used to breed in some numbers on the Scilly Islands it is just possible that a pair or two nested on Skokholm, as they used to be seen occasionally flying off the coast of the adjacent mainland at Dale ; this beautiful species has now, for many years, entirely aban-

doned all its breeding stations off the south-west parts of the kingdom, and is very rarely seen at the present day on any part of the south-west coasts.

Caldy, Danish, perhaps from cald, the same as in Cauldron, and signifying the "Boiling Island," from the swift and agitated waters off its rocky shores.

Caldy, a somewhat tamer island, and of less elevation than either Ramsey or Skomer, faces Tenby to the south-west, and is parted from it by Caldý Sound, about $2\frac{1}{2}$ miles in width. Like Lundy, it had in old times a considerable population; there were once upwards of thirty houses upon it, and a Priory; the ruins of the last are still to be seen. At the present day there is only the mansion of the proprietor. Caldý, whose ancient British name was Ynys Pyrr, "the island of Pyrus," is about a mile in length by half-a-mile in breadth, and contains an area of 611 acres. On the north side it is composed of mountain limestone; the southern part is old red sandstone. It is a well-cultivated and fertile farm, and there are some extensive limestone quarries. In 1828 the present fine light-house was erected, which contains a powerful dioptric fixed light, at a height of 211 feet above the sea, and in clear weather it is said to be visible at a distance of 26 miles. There are a good many cliff birds upon Caldý in the summer, that chiefly inhabit its channel, or south, side. These consist of Guillemots, Razorbills, Puffins, Herring Gulls, and a few pairs of Shags. Some Manx Shearwaters formerly nested upon the island, and Mr. C. Jefferys, of Tenby, believes that a few still do so, in the fissures of the cliffs. On the Tenby side of Caldý is situated St. Margaret's Island, perforated with vast caverns, and at low water connected with Caldý by a reef of rocks. Here some forty to fifty pairs of Herring Gulls nest, and a pair of greater Black-backed Gulls have also bred here of late years, and a few pairs of Shags, with numerous Guillemots and Razorbills, while a few Puffins inhabit the rabbit earths on the summit of the cliff. Mr. Jefferys informs us that, when he was on St. Margaret's Island in May, 1893, he frightened four or five Manx Shearwaters out of holes and fissures:—"They appeared to come from cracks about half-way down

the cliffs, and may, or may not, have been nesting there ; it certainly looks as if they were." He adds : "I believe the Chough still breeds at the back of Caldy, *i.e.*, on the Channel side ; they did so some four or five years ago, and this spring (1893) I saw a pair flying about St. Margaret's, having come from the direction of Caldy." Mr. E. W. H. Blagg, who was visiting Tenby in the summer of 1887, tells us that he saw a large flock of Manx Shearwaters flying off Caldy on several evenings.

III.—THE PEMBROKESHIRE LIGHT-HOUSES AND MIGRATION.

Both in the St. George's and Bristol Channels, and on either side of them, there are so many light-houses, some of them placed on rocks, or islands, miles out at sea, that they might well serve as points of direction to the passing flocks of migrating birds in the spring and autumn, helping them to their flight-lines ; while observations made from them would be of the greatest service to ornithologists, as they would disclose what birds pass the county, the periods of their passage, and the duration of the movements of the respective species. For several years (from 1879-1887) a committee appointed by the British Association supplied the keepers of light-houses and light-ships around the British Isles with forms on which they might enter the various birds that were attracted by their lights, with the condition of the weather, and the directions of flight, furnishing those of the most important stations with copies of illustrated books on British birds, in order that they might identify the species that came under their notice. The annual reports that were compiled from the information forwarded from a large proportion out of the total number of light-houses contain most valuable and interesting matter, although they are necessarily somewhat fragmentary and incomplete ; and have shed much light upon the wonderful seasonal movements of birds to and from our islands. We have carefully studied the reports from the Pembrokeshire light-houses, all of them well situated, the Smalls, in particular, from its position fifteen miles out at sea, in the centre of St. Bride's Bay, where it is almost exactly opposite to the light-house on the Tuskar Rock,

that stands seven miles off the Wexford coast, might well be expected to afford considerable information respecting the passage of birds between Pembrokeshire and Ireland. The light-house on the South Bishop's Rock, off the St. David's peninsula; the two light-houses at the entrance of Milford Haven; the tall light-house on Caldy, are all important stations, from which the returns are of great interest. Such light-houses as those in Cardigan Bay, on the Smalls, and on Lundy, are of special value, from their isolated position so many miles from land, where they must necessarily attract birds that make their aerial journeys well out at sea. In fine weather the birds fly wide of, or high above, the light-houses, but in stormy, or misty weather, they flutter about them during the night and the early hours of the morning in a bewildered manner, and hundreds perish from dashing themselves violently against the lanterns. We are quite unable to arrive at any beyond the most general conclusions, as the materials for forming any adequate theory are as yet far too scanty, from the returns supplied from the South Bishop's, the Smalls, the Milford, and the Caldy light-houses. They serve, however, to reveal the fact that several species, commonly regarded as stay-at-homes are to be included among the birds that are impelled by the migratory instinct; and they lead the ornithologist to formulate the canon that all birds migrate, although he is well aware that one or two species, such as the Dipper,¹ the Pheasant, and the Partridge, might be adduced as exceptions. Such familiar birds as the Robin, the Hedge Accentor, and the House Sparrow, are common migrants. Flocks of Rooks have been noted at the Smalls leaving the Pembrokeshire coast for Ireland in the spring, and returning in the autumn. The *Turdidæ* are the most restless of the migratory birds, and appear to be on the move almost throughout the year. A great number of Blackbirds and Thrushes perish by dashing on autumn nights against the lanterns of the South Bishop's and the Smalls Light-houses; a hundred, or more, have been picked up dead in the course of a few hours. The migrations of some species are continuously extended over a long period. The first Wheatear appeared

¹ The Dipper is, doubtless, an occasional migrant, as is proved by the appearance from time to time of the Scandinavian Black-bellied Dipper (*Cinclus melano-gaster*) in the Eastern Counties of England.

on the Tuskar Rock on March 1st in 1883, and others were seen passing at intervals until May 26th. At the same station Swallows, all making towards the north-west, continued to be seen from April 29th until June 21st in that same year. Their return south in the autumn is extended over an equally long period; on Caldy they were noted to be flying south from August 31st until November 11th. Swallows make their journeys by daylight, being always observed to pass during the forenoon. The southward migration of the Goldcrest was noted on the Tuskar Rock to begin as early as July 27th in 1883.

We learn much from these interesting reports concerning the dates on which some of our winter visitors leave our coasts for their northern breeding stations; they remain with us much later in the spring than they are commonly supposed to do. "Hundreds of Skua Gulls" were seen passing the Tuskar Rock so late as May 28th in 1883; others again on May 31st; others on June 7th or June 8th, and even as late as June 22nd. Some of these Skuas were observed to be heading *south*. We believe that, very often, the direction of the flight of birds as they are passing any particular station may furnish no correct guide as to the goal they are aiming at. The wind prevailing at the time may lead them to be flying quite contrary to their course until they meet with one suitable to their journey, and they may then have to retrace hundreds of miles that they have been driven from their desired flight-line. The Great Northern Diver leaves St. George's Channel about May 1st for the north, and returns again in October. At intervals during the winter, as has been observed at Lundy, flocks of Guillemots and Razorbills re-visit the islands that form their summer nesting stations, stay for the night, and disappear again in the morning. Such unlikely birds as Water Rails and Moor-hens are included among the birds noticed at night in the autumn at the South Bishop's and Smalls. The small soft-billed birds that arrive in the spring do not find their return journey to the woods and copses, in which they nest, any more exempt from peril than their departure in the stormy autumn. Thirty-five Whitethroats were killed against the Tuskar Light during the misty night of May 12th, 1884; while "scores" of Chiffchaffs perished on the night of April 22nd that same year. We learn that Cuckoos arrive in small flocks; eleven were seen passing

the Nash Light, heading north-west, on April 15th. A curious fact is reported from one of the Milford Haven light-houses respecting the Puffins; it is stated that they annually strike against the light at the beginning of September, and do not do so at any other season in the year.

The great bulk of the migrants that arrive in this country in the autumn come from the northern parts of Europe, and land upon the eastern and north-eastern shores of England and Scotland. Those that reach the western and south-western counties, and South Wales, cross England by river valleys chiefly; a very large number of birds make their passage over the narrowest part of the island, where we have the boundary between England and Scotland, and, striking the Solway Firth, travel down the north-west coasts. But eventually it is only a fraction, and that a fraction with its denominator ever increasing, that reaches the shores of South Wales and the south-west peninsula of England. The Knot, for example, still visits Morecambe Bay, on the coast of Lancashire, in thousands every autumn and winter, where the flocks are well known to the local shore-gunners by the pretty name of "School-girls," but it is a species that has, for some years, been extremely rare on our Pembrokeshire sands and oozes. We think that it may be regarded as a fact that the extreme south-west parts of the United Kingdom participate, in a comparatively small degree, in the great autumn rush of birds from the continent. Nor do they share, to any very much greater extent, in the spring migrants that reach us from the south and south-east. Our summer visitors come to us from very great distances, and there are few that wing their way only from the south of Europe and from Northern Africa. The Swallows, the Cuckoo, and many of the Warblers, have to return from their winter quarters about the Equator, or even from so far to the south as the Cape. They approach us by crossing France, by the Rhine valley to the east, or *viâ* Spain, the west coast of France, and directly across the Bay of Biscay to the west. The greater number traverse the English Channel at its narrowest part at the Straits of Dover, and, landing on the Sussex coast, disperse inland to the north, east, and west; but the main body, with respect to several species, becomes exhausted before the extreme western counties can receive their contingent, and

for this reason our Pembrokeshire Ornis is poor in respect to its summer migrants. Many also cross from projecting Capes on the coast of Normandy to the nearest headlands opposite; thus the neighbourhood of the Start Light-house in South Devon is a great landing-place; but these birds chiefly stock the counties of Devon, Cornwall, and Dorset, and only a few, if any, pass on northwards across the Bristol Channel. A few occasional visitors from the South of Europe, of which the Rose Pastor and the Little Bittern may be cited as examples, that not unfrequently cross the English Channel become absorbed by the southern counties of England, and only a rare straggler out of the number passes over the Bristol Channel into South Wales. This is the reason why South European species, not very rare in some of the English counties, are either without any record in Pembrokeshire, or have been noted there only in single instances. We cannot resist the conclusion that Pembrokeshire is, when compared with counties that are more fortunate in their position, somewhat of a bird-forsaken district. We have called attention elsewhere to the absence of American species, and have considered that others, besides the two which have been noted, may probably have occurred without recognition; for if we are correct in our opinion that American birds reach us mainly overland, across the north of Asia and Europe, and travel down our western coasts, it is reasonable to expect that so many would be met with in Pembrokeshire as have been recorded from the better-watched shores of Devon and Cornwall.

The spring and autumn migrants that fall to the share of Ireland do not appear to reach it, except to a very slight extent, by passing over our county. Birds arriving from the continent traverse the centre of England by river valleys, and, reaching the estuary of the Severn, an important highway, continue their flight over the Bristol Channel far to the south of the Welsh counties. Others come from the north-west, crossing England to the north and, passing the Isle of Man, land on the northern shores of Ireland; while the greater part of the summer visitors come up from North Africa, by the route of Spain and the Bay of Biscay, and fetch the south of Ireland after a long, but rapidly executed, passage high in the air, and directly over the water. Many also arrive *viâ* the English Channel,

and either round, or pass over the Land's End district of Cornwall. But we think that Pembrokeshire takes but little part in the flux and reflux of Hibernian birds.¹

CENSUS OF THE BIRDS OF PEMBROKESHIRE.

The list of the county birds supplied by Mr. H. Mathias, of Haverfordwest, to Mason's "Guide to Tenby" contains 191 species, but two of these, the *Firecrest*, and *Brünnich's Guillemot*, we are unable to accept. We have so often received brightly plumaged males of the *Goldcrest*, sent to us as *Firecrests*, that we suspect a similar mistake in this instance, particularly as we have been unable to trace any Pembrokeshire *Firecrest*, and have never discovered one in any of the existing collections of county birds. In a list of birds *nesting* on Skomer Island that we received from a friend the *Firecrest* is actually included! With regard to *Brünnich's Guillemot* there is no doubt that a confusion has been made between that species and the *Ringed Guillemot* (*Uria lacrymans*), for Mr. Mathias assured us that *Brünnich's Guillemot* (*sic*) nested on Skomer, whereas this northern form of Guillemot is not known to nest anywhere south of Greenland, and the few accidental specimens that have been reported as having been obtained upon our coasts are viewed by competent ornithologists with much suspicion. The Rev. C. M. Phelps, at the foot of Mr. Mathias' list, adds two birds that are omitted in it, the *Golden Oriole* and the *Rose Coloured Pastor*, thus bringing the total to 191, as given above. In our account of the birds of Pembrokeshire, including three doubtful occurrences, we can only bring the gross total to 236. On the opposite side of the Bristol Channel we have been able to catalogue as many as 300 species for the much larger county of Devon, and 264 species for the county of Somerset. Mr. Howard Saunders, in his "Manual of British Birds," the most recent authority on the subject, gives the total number of birds for the British Isles as 368, so that

From the reports from the South Bishop's and Smalls Light-houses we find that Blackbirds, Thrushes, Sky-larks, Linnets, Chaffinches, House Sparrows, Starlings, and Rooks, pass over to Ireland *via* the Pembrokeshire Coast.

Pembrokeshire is deficient by no less than 132 of this number. No doubt, the small number of birds we can record for Pembrokeshire is due, in great part, to the want of observers who might have noted occurrences that are not included in any of the existing lists ; and we think, also, that the county is left out in the cold, so to speak, by many birds that either pass its coasts in their migrations, or do not extend their flight so far towards the south-west as to reach it ; and we have pointed out that the Precelly Mountains act as a barrier to exclude from it several of the smaller summer visitants. But we think it very probable that an ornithologist posted at a good position, such as at Pembroke, for instance, might have it in his power to make additions to our list. It will be observed that we have been able to set down only *two* stragglers from America. In whatever way American birds reach the British Islands, whether by crossing the Atlantic far to the north, where it is narrowest, and then striking and following down the coasts either on the east or west, or by coming chiefly overland *viâ* the north of Asia and Europe, the extended littoral of Pembrokeshire might have been expected to have intercepted as many American species as the coasts of North Devon and Cornwall ; and as, for those two counties, at least a dozen American birds have been recorded, some additions to the Pembrokeshire list might be fairly anticipated in this direction.

Our 235 species on the Pembrokeshire list are composed of :

I.	Residents	...	...	...	...	...	81
II.	Summer Visitors	...	...	...	...	...	27
III.	Winter Visitors	...	...	...	...	...	43
IV.	Passing Migrants in Spring and Autumn						8
V.	Occasional Visitors	...	...	...	...	...	54
VI.	Waifs and Strays	...	...	...	...	...	15
VII.	One former Resident (Black Guillemot)	...					1
VIII.	Introduced Species	...	...	...	...	...	4
							233
To which may be added three doubtful occurrences							3
							236

After detailing these in order we shall proceed to describe :

IX. Some Absentees, that might reasonably be expected in the county.

X. Some Characteristic Birds ; and lastly,

XI. The species that nest, and are known to have nested, within the county confines.

(I.) The Residents are 81 in number, and are the following :—

Mistle-thrush	Yellow-hammer	Wild Duck
Song-thrush	Reed Bunting	Ring Dove
Blackbird	Starling	Stock Dove
Stonechat	Chough	Rock Dove
Redbreast	Jay	Partridge
Goldcrest	Magpie	Red Grouse
Hedge-sparrow	Jackdaw	Water Rail
Dipper	Carriion Crow	Moor-hen
Long-tailed T	Rook	Coot
Great Tit	Raven	Golden Plover (?)
Coal Tit	Sky-lark	Ringed Plover
Marsh Tit	Wood-lark	Lapwing
Blue Tit	Green Woodpecker	Oyster Catcher
Wren	Kingfisher	Snipe
Pied Wagtail	Barn Owl	Woodcock
Grey Wagtai	Tawny Owl	Dunlin (?)
Meadow Pipit	Hen Harrier	Curlew
Rock Pipit	Buzzard	Kittiwake
Tree Creeper	Sparrow-hawk	Herring Gull
Goldfinch	Peregrine	Lesser Black-backed Gull
Greenfinch	Merlin	Greater Black-backed Gull
House-sparrow	Kestrel	Storm Petrel
Chaffinch	Cormorant	Manx Shearwater
Linnet	Shag	Little Grebe
Redpoll	Gannet	Razorbill
Bullfinch	Heron	Common Guillemot
Corn Bunting	Common Sheldrake	Puffin

Although all the above are entitled to be classed as residents, yet their numbers vary according to the seasons, some of them, such as the Goldcrest, Redpoll, Merlin, Snipe, Woodcock, &c., being more numerous in the winter, when they are reinforced by arrivals from the north ; while others, like the Mistle-thrush, Goldfinch, &c., are scarce, comparatively, in the winter, owing to the bulk of them having migrated to the south. The greater number of the cliff birds, too, have left us in the winter, to disperse themselves far

and wide over the adjacent seas, and many of them have wandered into far lower latitudes. Of the whole number very few indeed remain stationary ; our own home-bred birds have left us by the winter for the south, and have been replaced by strangers coming in from the north, until the spring calls these last back to their northern breeding grounds, and our own birds return to the familiar spots in which they have been reared. Out of all the residents, perhaps, the Dipper, the Pheasant, and the Partridge may be cited as the only stay-at-homes.

Since the commencement of the present century the county has lost the Marsh Harrier, the Kite, and the Black Guillemot from its list of Resident Birds, and has acquired the Starling, previously only a winter visitor, and the Ring-necked Pheasant (*Phasianus torquatus*), that appears to have been introduced about seventy years ago. The Mistle-thrush is rare in the winter, most of the birds leaving us in the early autumn. Some of the *Coniostres*, or seed-eating small birds, are fewer in number than they are in general in England ; the House-sparrow is scarce in most parts of the county, and in some places in the north is seldom seen. The Linnet, Goldfinch, and Yellow-hammer are numerous, as are also the Chaffinch and Greenfinch. The Sky-lark is not abundant anywhere, and the Wood-lark is rare and local, and seems to be disappearing. The Hen Harrier, we think, annually decreases in numbers ; so, too, does the Chough, which used to be an abundant species on the coast, and the diminution in its numbers is not to be entirely explained by persecution. Although not so common as it was in bye-gone years, the Buzzard still fairly holds its own ; a correspondent has informed us that as recently as in the month of April in the present year (1894), in a walk from Solva to St. David's Head, along some seven or eight miles of the cliff, he encountered five pairs of this fine bird. A pair or two of Merlins nest in the wilder parts of the county, and the bird is not uncommon as a winter visitor. The Red Grouse may still exist on the Precelly Mountains, but in very reduced numbers, and for want of preservation is in danger of becoming lost ; on the same mountains it is probable that a few Golden Plovers and Dunlins breed, as there are places very suitable for them, and they are known to nest at no great distance in the

adjoining county of Cardigan. The Common Snipe nests throughout the county, but at the present time there is not a tithe of its ancient numbers. The multitudes of cliff birds that resort to the islands off the coast in the summer to nest is the most important feature in the Ornithology of the county; the island of Skomer is, probably, the largest nesting station of the Manx Shearwater in the British Isles, and Grasholm is one of the few breeding places of the Gannet.

(II.) The summer visitors are 27 :—

Ring-Ouzel	Wood Warbler	Swift
Wheatear	Sedge Warbler	Nightjar
Whinchat	Grasshopper Warbler	Wryneck
Redstart	Tree Pipit	Cuckoo
Whitethroat	Red-backed Shrike	Turtle Dove
Blackcap	Spotted Flycatcher	Quail
Garden Warbler	Swallow	Corn Crake
Chiffchaff	Martin	Common Sandpiper
Willow Warbler	Sand Martin	Common Tern

The Redstart is extremely rare, and the only instance we know of its having bred in the county is the one reported by Mr. Dix on the Cardigan side of the Precelly Mountains. We have seen statements in the local papers that the Nightingale has been heard singing in the summer time near Clarbeston, in the centre of the county. But the bird is unknown in south-west Wales, and the song of some other bird must have been taken for its notes. The Garden Warbler occurs rarely only in the north-eastern part of the county; the Precelly Mountains shut it off from visiting the central and southern districts, where it is never seen. The Blackcap is scarce. The Chiffchaff is the most abundant of all the small summer visitors; the Willow Wren is far from numerous, and the Wood Wren is very local, and is only found at all commonly on the eastern side of the Precelly Mountains; it is never seen in the centre of the county, and appears to be rare in the south. The Sedge Warbler is abundant by streams that are fringed with cover; the Grasshopper Warbler is rare and is very local. The Red-backed Shrike is rare, and seems to confine itself to the south of the county. The Spotted Flycatcher is abundant. The Turtle Dove is rare, and the only record of its nesting comes from the neighbourhood of Pembroke. The Wryneck is rare and local. The Quail is an irregular summer

migrant; in some years it is common, especially in the St. David's district, and in the north of the county.

(III.) The autumn and winter visitors are 43:—

Redwing	Pintail	Curlew Sandpiper
Fieldfare	Teal, B.	Purple Sandpiper
Black Redstart	Shoveller	Green Sandpiper
Siskin	Tufted Duck	Redshank
Brambling	Scaup	Greenshank
Snow Bunting	Pochard	Common Gull
Long-eared Owl	Goldeneye	Brown-headed Gull
Short-eared Owl, B.	Long-tailed Duck	Great Skua
Bittern	Common Scoter	Pomatorhine Skua
Spoonbill	Goosander	Richardson's Skua
White-fronted Goose	Red-breasted Merganser	Buffon's Skua
Brent Goose	Smew	Great Northern Diver
Barnacle Goose	Grey Plover	Red-throated Diver
Bewick's Swan	Grey Phalarope	
Wigeon	Jack Snipe	

The Siskin is rare, and is not noted every winter. The Short-eared Owl occasionally remains to nest. The Wigeon and Teal are the only ducks that arrive in any numbers; a few Teal may breed with us on quiet pools. The Oceanic Diving Ducks, such as the Tufted Duck, Scaup, and Common Scoter, are sometimes numerous in the bays in the winter. Bewick's Swan is seen almost every winter; many flocks are sometimes noticed passing overhead in severe weather. All the Wild Geese appear to be rare in Pembrokeshire, with the exception of the coast frequenting species, the Brent and the Barnacle. And this is a little singular, because enormous flocks arrive regularly every autumn and winter in Glamorganshire, and some detachments might be expected to continue their flight a little farther towards the west. We have been informed that small flocks are occasionally seen on the Laugharne marshes just over the Pembrokeshire border in Carmarthenshire,—also on the marshes near Tenby. On Miss Talbot's estate of Margam, in Glamorganshire, over a thousand Greylag Geese make their appearance every autumn, and one winter an enormous flock was seen there, chiefly of White-fronted Geese, that was computed to number at least 6,000 birds. The Greylag Goose is almost unknown on the opposite coasts of Somerset, and we are without a single record of its

occurrence in Pembrokeshire. The highly-preserved estate of Margam may have been found by the birds to offer them undisturbed feeding-grounds, and they would naturally avoid marshes and flats that were almost daily shot over. This is, doubtless, one of the reasons that the large flats in south Pembrokeshire, which appear to be very suited to them, remain unvisited. The Goosander is more often seen than the Red-breasted Merganser, and the Smew is rare. The Sandpipers are generally scarce on the Pembrokeshire coast at the present day; Goodwick Sands, in former times, were visited by numerous waders, but they are now greatly disturbed, and are chiefly the exercise ground for training horses, and the birds are scared away. On the many occasions, at different times of the year, when we have passed the creeks and oozes connected with Milford Haven, we have been struck by the absence on them of Sandpipers of any species. They are probably constantly watched, and every bird that appears shot at, and frightened off. The Skua Gulls pass down St. George's Channel in the autumn, and in fine weather keep far out at sea; it is only in severe gales that they are driven to approach the shore, and their appearance is therefore irregular. The Great Northern and Red-throated Divers are frequently common in Milford Haven.

(IV.) Passing migrants, that are usually seen both in spring and autumn, are only 8 :—

Yellow Wagtail	Sanderling	Arctic Tern
Turnstone	Bar-tailed Godwit	Black Tern
Knot	Whimbrel	

Of these the Yellow Wagtail is more commonly seen in August on its way south. The Knot may sometimes be found on the coast during the winter. The Bar-tailed Godwit used to be numerous on the oozes in the autumn; it is now a rare bird.

(V.) The occasional visitors supply a longer list, and are 54 in number :—

Lesser Whitethroat	Golden Oriole	Cirl Bunting
Bearded Tit	Great Grey Shrike	Rose-coloured Pastor
Nuthatch	Waxwing	Hooded Crow
White Wagtail	Pied Flycatcher	Great Spotted Woodpecker
Blue-headed Yellow	Hawfinch	Lesser Spotted Woodpecker
Wagtail	Crossbill	Hoopoe

Marsh Harrier	Eider Duck	Little Tern
Montagu's Harrier, B.	Velvet Scoter	Glaucous Gull
Rough-legged Buzzard	Spotted Crake	Little Gull
White-tailed Eagle	Crane	Sabine's Gull
Kite	Stone Curlew	Leach's Petrel
Honey-Buzzard	Dotterel	Black-throated Diver
Hobby	Avocet	Great-crested Grebe
Little Bittern	Great Snipe	Red-necked Grebe
Night Heron	Little Stint	Slavonian Grebe
Bean Goose	Ruff	Eared Grebe
Whooper	Wood Sandpiper	Little Auk
Gadwall	Spotted Redshank	
Garganey	Black-tailed Godwit	

One or two of these, such as the White Wagtail and the Great-crested Grebe, may be regular visitors, the former in the summer, the latter in the winter. There is at least one breeding-station of the Great-crested Grebe in Wales, on Llangorse Lake, in Breconshire, and we think it must regularly appear on the fine sheet of water at Stackpole every season. The Lesser Whitethroat is almost unknown in the county. We have heard of Bearded Tits from Breconshire, and from both the eastern and western sides of Carmarthenshire, and think it probable a few pairs may nest in South Wales. It is singular that we should know of but one instance of the Nuthatch having occurred in Pembrokeshire; it appears to be a scarce bird throughout the south of the Principality. The Pied Flycatcher is fairly common in most parts of Wales, and is known to breed in Carmarthenshire, preferring woods at some elevation where there is old timber, but it does not extend so far as Pembrokeshire, in which it is very rarely seen, and where we have no instance of its nest. With the exception of the Green Woodpecker, and the Tree Creeper, scansorial birds are rare in such a comparatively treeless county as Pembrokeshire. The Hoopoe is not rare. We have no recent instance of the Marsh Harrier having nested in the county; it was once a common resident. Montagu's Harrier is very rare, and we only know of a single nest. The Kite is only a rare occasional visitor, and it is long since it has nested in the county. From evidence we have accumulated we think it probable that in the adjoining counties of Cardigan, Carmarthen, and Brecon there may be at the present day

at least six or seven pairs of Kites annually nesting, in great danger, we fear, of destruction ; we wish such interesting birds could obtain protection. In the report of the Scientific Society of the University College of Wales, Aberystwyth, for 1892-93, it is stated that the Kite " still exists in small and decreasing numbers at no great distance from us. Two pairs, with their nests, were seen, May 23rd, 1893." Of many of the occasional visitors we possess but a single instance, but some of them must have occurred oftener, without having been reported ; and we feel confident that observation may yet extend the list.

(VI.) The accidental visitors, or waifs and strays are 15 :—

Melodious Warbler	Red-footed Falcon	Pallas's Sand-grouse
Bee Eater	American Bittern	Baillon's Crake
Yellow-billed Cuckoo	Glossy Ibis	Roseate Tern
Scops Owl	Ruddy Sheldrake	Greater Shearwater
Greenland Falcon	Red-crested Pochard	Fulmar

Two of these, the Yellow-billed Cuckoo, and the American Bittern, are wanderers from America. Another Yellow-billed Cuckoo has occurred at Lundy Island, no very great distance from Stackpole, where the Pembrokeshire specimen was obtained, and the American Bittern has appeared in North Devon, and also in Cornwall.

(VII.) Former resident.

At the beginning of the present century Colonel Montagu detected the Black Guillemot on the cliffs near Tenby, and also at St. David's. It seems to have disappeared very soon after his visit to the county, as we can discover no mention of it in any subsequent references to the cliff birds, nor have we met with anyone who has ever seen a Pembrokeshire specimen of this northern species.

(VIII.) The introduced species are 4 :—

Egyptian Goose	{ Pheasant	Red-legged Partridge
Mute Swan	{ Ring-necked Pheasant	

We are not aware that any Egyptian Geese are now kept on any ornamental waters in the county. The Mute Swan exists on the lake at Stackpole in what may be considered as virtually a wild state ; as it is free to depart and return at will, and leaves every autumn when the food supply fails, coming back again in the spring to nest and

to remain throughout the summer. The Pheasant thrives in Pembrokeshire remarkably well; the Red-legged Partridge refuses to become a resident, doubtless finding the climate too humid.

(IX.) Some noticeable absentees.

Directly we began to study the Birds of Pembrokeshire we were struck by the number of absentees. Many birds were wanting that we felt confident ought to appear. We were, at first, led to attach our chief interest to scheduling these non-appearances, although this might seem rather a negative way to work the County Ornis. The character of the county doubtless accounts for several birds being non-resident that are not uncommon in many other parts of the kingdom; in such a treeless district scansorial birds would not be expected. The following is a list of species that are common in most of the English counties, as also in Central and Eastern Wales, that are either never seen, or are extremely rare, in Pembrokeshire; of those marked with an asterisk we are without a single instance :—

Redstart	Great Grey Shrike	Great Spotted Woodpecker
*Nightingale	Red-backed Shrike	Lesser Spotted Woodpecker
Lesser Whitethroat	Pied Flycatcher	Wryneck
Garden Warbler	Hawfinch	*Osprey
*Dartford Warbler	*Tree Sparrow	*Greylag Goose
Wood Wren	*Mealy Redpoll	*Black Grouse
*Reed Warbler	*Twite	Spotted Crake
Nuthatch	Cirl Bunting	Stone-Curlew
Ray's Wagtail	Woodlark	Dotterel

Of these, the Reed Warbler, the Garden Warbler, and the Lesser Whitethroat, appear to be very rare throughout Wales, as they are also in the south-west counties of England. The Reed Warbler is stated to nest in Breconshire, at Llangorse Lake. In a county so mild in temperature and so abounding in furze-brakes on sheltered hill-sides, the Dartford Warbler might well be expected, but we have not succeeded in detecting it. Ray's Wagtail, in Pembrokeshire, is only seen as it passes in spring and autumn, and there is no instance of its having remained to nest. The Red-backed Shrike is rare; and the Great Grey Shrike does not seem to reach often so far to the west after arriving in the autumn on the eastern coasts of the kingdom. The Pied Flycatcher is almost unknown in Pembrokeshire, although

it is not uncommon as a visitor to other parts of Wales in the summer, and it is known to nest as near to Pembrokeshire as in the adjacent county of Carmarthen. It is fond of woods containing old trees on hill-sides at some elevation above the sea; Mr. Cambridge Phillips reports it as quite a common bird in Breconshire. The Tree Sparrow is rare and local in South Wales; it occurs in Breconshire. We know of no South Wales example of the Mealy Redpoll. Mr. J. H. Salter, of Aberystwyth, has searched the moors in Cardiganshire in vain for the Twite, of which we have no record in Pembrokeshire; in Breconshire it would seem to be not uncommon. We know of only one occurrence of the Nuthatch; the Greater and Lesser Spotted Woodpeckers are rare visitors, while the Wryneck is scarce and local. We have no Pembrokeshire Osprey, although the bird in former years very probably occasionally put in an appearance on Milford Haven. Wild Geese, in these days, are but seldom seen; there is not a single instance of a county specimen of the Greylag Goose. The Black Grouse is now extinct; in old times it was a resident, as its bones may be found to-day in the Bone Caves near Tenby. The Norfolk Plover occurs only very rarely in winter. The Dotterel is also rare; as is also the Spotted Crake, in spite of the shelter offered to it by the numerous moors and marshes throughout the county.

(IX.) Some characteristic birds.

After thus detailing the absentees, and others that are very scarce, although not rare in other parts of the kingdom, we turn with more satisfaction to enumerate those that may be considered as the characteristic birds of the county, that are rarely absent from lending life and charm to its varied scenery. On its cliffs along the coast the Buzzard, the Peregrine, the Raven, and the Chough, with the Wheatear and the Rock Pipit, may be still encountered; and it would be a rare event, indeed, to visit any part of the shores, and to find them all absent. In the north of the county the Hen Harrier still quarters the wilder moors. The Water Ouzel and the Grey Wagtail are common by every stream, and on the mountains have for their summer companions the Ring Ouzel and the common Sandpiper. The pretty Stonechat can be seen on every common, and is one of the charac-

teristic small birds. The Cuckoo and the Nightjar rejoice in the wilder parts of the county, where they are exceptionally plentiful. The Red Linnet, the Yellow-hammer, and the Chaffinch are very abundant. The Chiffchaff and the Sedge Warbler are by far the best represented among the soft-billed summer migrants; the former occasionally passes the winter with us, and we have ourselves seen it in January at Stone Hall. The Common Snipe breeds throughout the county; a walk in the spring across any common will be enlivened by its strange "drumming" in the air. In the summer, some of the cliffs along the coast, and most of the islands, are thronged with innumerable birds; among them the Gannet and Manx Shearwater are remarkable, as they have nesting stations in but few other places in the kingdom.

(XI.) Species nesting in the county.

Dr. Propert, of St. David's, has supplied us with a list of the birds that, according to his experience as an oologist, nest within the county, comprising a total of 81 species. Several are absent that could not be expected to breed in his treeless district which, nevertheless, have their nesting stations in the woods and copses inland, or in the south of the county; while others can be added that are to be met with on the Precelly Mountains. According to our census we arrive at a total of 113 nesting birds; that is made up of:—

Residents	...	...	...	...	...	...	79
Summer Visitors	...	...	...	...	...	...	27
Winter Visitor (Short-eared Owl)	...	...	...	...	...	...	1
Occasional Visitor (Montagu's Harrier)	...	...	...	...	...	...	1
Introduced Species (Mute Swan and Pheasant)	...	...	...	...	...	...	2

110

To these we believe that we may add three others that are probably residents in small numbers, Teal, Golden Plover, and Dunlin

... .. 3

113

Since the commencement of the century we have lost three species that formerly nested in the county ; viz., the Marsh Harrier, the Kite, and the Black Guillemot.

The number of our breeding birds, 113, may be compared with those that have been ascertained to nest in the district surrounding Aberystwyth, in the neighbouring county of Cardigan. These are stated to be 94, comprising 68 resident species, and 26 summer migrants. This list, however, is considered to be incomplete, and additional nesting birds may yet be detected.

We can only regret that materials are not at hand to enable us to present a brief sketch of the Ornis of South Wales in general, as we feel persuaded it is far from being so scanty as anyone who examines our account of the Birds of Pembrokeshire, its extreme western county, might suppose it to be. The Great Western Railway runs along the coast in many places as it traverses South Wales, and the traveller who looks out from the carriage windows of the train will see many a stretch of sand and ooze that look as if they were acceptable to the class of waders. We have seen the mouth of the Carmarthen river, at Ferryside, and some of the oozes we have mentioned occasionally covered with birds, as we have journeyed to and fro ; and have often thought that the fine counties of Carmarthen and Glamorgan, especially the latter, with its beautiful peninsula of Gower, its extended coast, numerous bays, and muddy inlets, would yield an interesting and much fuller list of birds. We can but pray—*exoriare aliquis!* who will take the work in hand to record in either of these counties some particulars of their Fauna.

In our account of the Birds of Pembrokeshire we have given no description of the various birds, nor have we entered into the subject of classification ; as these matters are fully treated of in the standard works on British Birds. We have followed the arrangement of the Ibis List ; and to anyone who may be tempted by our book to seek for more information respecting the birds mentioned in it we can heartily commend Mr. Howard Saunders' very useful "Manual of British Birds."

The Birds of Pembrokeshire.

MISTLE THRUSH, *Turdus viscivorus*.—Although not so numerous as it has become of late years in some English counties, this fine Thrush is fairly common as a resident throughout Pembrokeshire. There were always several nests in our grounds at Stone Hall, the birds frequently selecting some tree close to one of the paths, from which they would angrily scold the passer by. About the middle of July these Thrushes flock, and soon after the majority disappear, having migrated south. We have seen the broods of young birds in our kitchen garden, helping the Black-birds in their raids upon the fruit. The beautiful eggs of the Mistle Thrush occur in two varieties, one in which the red markings are on an apple green ground, the other having a ground of creamy white.

SONG THRUSH, *Turdus musicus*.—A common resident. After the severe winter of 1880 there was scarcely a Thrush left in North Pembrokeshire. We neither heard the delightful song, nor saw an example of the bird in the following spring and summer. We were told of one that had been shot in the summer (this seemed a sacrilege !) in a garden at Fishguard ; and it took two seasons before the woods and copses became again replenished by immigrants. Mr. Dix considered the Song Thrush to be rather a scarce bird in the north-east corner of the county.

REDWING, *Turdus iliacus*.—A common winter visitor. The little flock that arrives at some favourite locality in the autumn does not stray far from it unless exceptionally severe weather sets in,

and on the approach of spring the birds assemble in the nearest tall trees, and sing in concert a low sweet song, the notes of which are very pleasing to anyone standing below. The Redwings vary greatly in their numbers, some seasons being abundant, at others few are seen.

FIELDFARE, *Turdus pilaris*.—A common winter visitor. In severe weather great numbers of Fieldfares used to appear in our neighbourhood. They seemed to be quite as susceptible to the cold as the Redwings. One very long-protracted frost, when the ground was deeply covered with snow, we caught and brought numbers of the starving birds into our kitchen; but it was all in vain we offered them various kinds of food; none of them ever survived longer than a fortnight. Flocks of Fieldfares have remained with us until the end of April, when they were much tamer than they were during the winter, and, collecting on the tops of the trees, would keep up a not unpleasing chattering. We consider that in the north of the county Fieldfares were every winter more plentiful than Redwings, the mountain character of the district being unsuited to the latter birds.

BLACKBIRD, *Turdus merula*.—A common resident. Its numbers rapidly increase when there has been a succession of mild winters, but like all the members of the Thrush family, it suffers much in a severe frost. The Blackbird is exceedingly pugnacious. One hard winter, when the snow lay for weeks upon the ground, and the temperature day after day was considerably below the freezing-point, our Blackbirds were nearly starved, and several times a day we put plates of barley-meal, bread, and scraps of meat at our dining-room window for their relief. Hungry as they were, the assembled birds, at least a score, never began to feed without a desperate combat, and the surface of the snow would be black with the feathers of the belligerents. One summer's evening a fox was seen to jump up into the air and capture a Blackbird as it flew out of one of our small covers.

Clever fox! Blackbirds are among the most restless of birds, and seem to be always on the move, as we learn from the reports of the movements of birds received from the lighthouses round the coast. There is hardly a day in the year when some do not strike against the lights. Many of these birds may be only making short local journeys, and taking their flight across the water from point to point.

RING OUZEL, *Turdus torquatus*.—A summer visitor. A few sometimes remain in this country for the winter. The station of the Ring Ouzel is to be sought for on the moors and hills. When we have been fishing in the summer months in the small streams which run down from the bogs on the Precelly Mountains, we have frequently encountered pairs of Ring Ouzels, whose angry chatterings and impatience of our intrusion plainly revealed that we were near their nests. Mr. Dix writes: "Although I have not seen this bird, I have every reason to believe it breeds (occasionally at least) in this district. My young friend, Arthur Phillips, of Newcastle Emlyn, took some eggs in 1867, when he distinctly saw the bird leave the nest."

WHEATEAR, *Saxicola ænanthe*.—A summer visitor. Common all round the coast, and very numerous on the Precelly Hills. On their arrival in the spring we used to see Wheatears for a few days about our fields at Stone Hall, but they soon moved on towards the hills. Mr. Dix writes: "I was agreeably surprised to find this bird breeding about the north-eastern portion of the Precelly Mountains." Indeed, in our experience, the Wheatear is the most numerous of all the small birds to be found on those lofty hills during the summer months.

WHINCHAT, *Pratincola rubetra*.—A summer visitor. Although Mr. Dix wrote that the Whinchat was decidedly rare in his district, which was the north-eastern corner of the county immediately adjoining Cardiganshire, we have found that it is

pretty generally distributed, and have seen it on the Precelly Hills at Rosebush, on Cuffern Mountain, at St. David's, at Stone Hall, where we have seen the nest, &c. &c.

STONECHAT, *Saxicola rubicola*.—A common resident. This pretty little species is so numerous, to be seen everywhere, by the roadside, perched on the furze on every common, on the coast as well as far inland, that it is well entitled to be considered one of our characteristic county birds. Mr. Dix states that it is to be found "particularly on the hill-sides which are covered with furze: they are generally to be seen in pairs, and, like the Hedge-Sparrow, in close company. During the severe weather last February three pairs were in constant attendance upon some men who were moving earth from an old bank: they perched upon some bushes near by, watching for anything that might turn up in the shape of food, when down they came within a foot of the tools; they kept close watch, for several times I saw three or four fly down at the same moment, and so intent were they in their search that one was caught by a hat being placed over it, the man thinking I wished to have it." We have found the nest frequently in our fields round Stone Hall, a commonly chosen site being a small furze-bush in which it would be placed close to the ground. However severe the weather we do not believe that these little birds go very far away from the spot where they were bred.

REDSTART, *Ruticilla phoenicurus*.—A summer visitor. Reported to be abundant in the neighbouring county of Cardiganshire; it is, however, extremely rare with us in Pembrokeshire, where we have never once seen it. Mr. Dix mentions a pair that nested in an old bee-house at Kilwendeage, in the north-east of the county, in the summer of 1866, and returned to the same spot the following year. He adds: "This species is not at all numerous, I have only seen three birds besides those that bred at Kilwendeage; the men working in the gardens had never seen any before." A few Redstarts are occasionally seen in the south of the county, as we learn from friends and correspondents.

BLACK REDSTART, *Ruticilla titys*.—A winter visitor, not common. From its extent of coast Pembrokeshire appears to be peculiarly suited to this species, and it has occurred both on the northern and the southern shores of the county. In the north it has been seen several times and shot by Sir Hugh Owen at Goodwick: "Single specimens on the moors in hard weather." In the south, the Rev. Clennell Wilkinson has seen it in his garden at Castle Martin. Mr. Tracy mentions two examples that occurred in the autumn of 1847; one killed by Mr. George Hughes, of the Coburg Hotel, Tenby, on the eaves of the hotel; the other by himself, with an air cane, loaded with small shot on the water trough of his neighbour's house in Pembroke; and Mr. Dix was informed by him that he considered the species a regular winter visitor to Pembroke, where it might be seen frequenting the walls of the old castle. There is an example of the Black Redstart in the Mathias Collection in the Tenby Museum. Mr. Charles Jefferys informs us that he used to see one or two Black Redstarts every autumn at Tenby, but for several years has failed to see or hear of any.

REDBREAST, *Erithacus rubecula*.—A common resident. During the extreme cold in the winter of 1880 Robins and many other small birds, such as Hedge-sparrows, Wrens, Chaffinches, Blue and Great Tits, flocked into our house for warmth and shelter. We had at least half-a-dozen Robins distributed between the hall, kitchen, and dining-room. The little visitors became quite tame, hopping fearlessly about on the carpet, and picking up the crumbs thrown to them. In this way they were all preserved until the arrival of the welcome thaw, when they returned to the outside world. One summer a Robin used to come in at our dining-room window, and alighting on the table would amuse himself by pecking at the pen with which one of us might be writing, and by playing with the writing implements in general. He would spend hours with us, flying to the top of somebody's head, and remaining there whenever the cat came into the room. Sometimes he would make his

appearance at, and enter, the bedroom windows. After several months of this familiarity, which was altogether uninvited, he suddenly disappeared, having fallen a victim, we feared, to some cat or hawk. One summer a Thrush feeding on our lawn was watched by a Robin that flew down and seized a worm from it directly it caught one. This would be done again and again until the Robin's appetite was satisfied. The Thrush made no resistance, seeming to take the theft as a matter of course, and suffered itself to be treated in this manner day after day. We fancied it had in some way been hypnotized by the Robin. Every year among the Robins' nests that we detected in our grounds at Stone Hall there would be one containing pure white eggs, by no means a common variety.

WHITETHROAT, *Sylvia cinerea*.—A common summer visitor.

Next to the Chiffchaff and the Spotted Flycatcher, the common Whitethroat is the most abundant of the small summer visitors, being generally dispersed and numerous throughout the county.

LESSER WHITETHROAT, *Sylvia curruca*.—This species is not included in their lists either by Mr. Dix or by Mr. Tracy. It does not appear to visit the adjoining county of Cardiganshire, which is far richer in the smaller summer birds than Pembrokeshire. We have, ourselves, never met with it, and it is a little bird that cannot easily escape detection. We have seen no specimens of it in any collection of stuffed birds in the county. We only admit it doubtfully on account of information supplied us by Mr. Mathias, of Haverfordwest, who tells us that when he was a boy of 14 or 15 he found a nest of this species at Lamphey, being at that time well acquainted with both the Common and Lesser Whitethroats through having taken the nests of both of them on many occasions in Gloucestershire. He adds that in the summer of 1882, a pair of these little birds frequented Hayguard Hay bottom in the parish of Dale, where he watched them closely on several days hoping to find the nest, "but they were too much for me, nettles and thorns

making more impression on my hands than they did fifty years before."

BLACKCAP, *Sylvia atricapilla*.—A summer visitor, far from common. We could never detect this beautiful songster at Stone Hall until the small fruit began to ripen in the kitchen-garden. Writing of it in his neighbourhood Mr. Dix says, "First heard on 12th April; three or four pairs bred in the plantations near, but it is not numerous." In Mr. Tracy's list, which refers chiefly to the birds observed in the south of the county, the Blackcap is stated to be common.

GARDEN WARBLER, *Sylvia hortensis*.—This is another of the small summer visitors, which is common in Cardiganshire, and seems to avoid our county. We have never seen it, although from where he wrote, on the borders of Cardiganshire, Mr. Dix was able to report of it "about as numerous as, and seen about a week after, the Blackcap." In the south of the county Mr. Tracy obtained a Garden Warbler in September, 1849, and states that it was the only one he ever saw. It passed into the collection of Lord Cawdor, at Stackpole.

GOLDCREST, *Regulus cristatus*.—A common resident, receiving accessions to its numbers in the winter from northern countries. Mr. Dix saw a flock of about fifty in a plantation on 6th November. Goldcrests were always numerous in the larch plantations at Stone Hall, where we came across numbers of their beautiful nests. One we found close to the house was entirely lined with the feathers of the Green Woodpecker. There was a nest of these birds in an adjoining sycamore tree. We have had several bright plumaged male Goldcrests sent to us by friends for Firecrests. Although the Firecrest is extremely likely to occur *in the winter-time* in Pembrokeshire, we have not yet either seen or heard of a county specimen. It may be useful to remark that the Firecrest is always to be easily distinguished from the Goldcrest by the white line above the eye.

CHIFFCHAFF, *Phylloscopus rufus*.—This tiny bird is by far the most numerous of our summer visitors, and is greatly in excess of the Willow Warbler. In the shrubberies at Stone Hall, in the spring of 1885, we noticed eleven nests of the Chiffchaff, and only one of the Willow Warbler, and this, we think, is an approximation to the relative numbers in which these birds occur. From our experience in various parts of England, we have come to regard the Chiffchaff as more a bird of the hills, and the Willow Warbler as belonging to the plains. In North Devon, where we once resided, it was moderately hilly, and there the two birds were met with in about equal numbers. Where we are living now, on the Radstock coal measures some 500 feet above the sea-level, the Chiffchaff is very numerous, and the Willow Warbler is seldom seen, just as is the case in North Pembrokeshire. In his north-eastern corner of the county, when he was at the other side of the Precelly Mountains which greatly influence the distribution of the Warblers with us, cutting many species entirely off from our northern and central districts, Mr. Dix had failed to notice this preponderance of the Chiffchaff we have pointed out. He observes of the Willow Warbler: "Much less numerous than in the east of England;" and of the Chiffchaff, "This is about equal in number to the Willow Warbler," and he considered that the Chiffchaff was more numerous in his neighbourhood in the autumn than it was in the spring. A few Chiffchaffs remain with us for the winter; we have seen one at Stone Hall in the beginning of January.

WILLOW WARBLER, *Phylloscopus trochilus*.—A not very numerous summer visitor. A nest found at Stone Hall, near a pond much frequented by Herons, was entirely lined with the small grey feathers of those birds.

WOOD WARBLER, *Phylloscopus sibilatrix*.—A scarce and very local summer visitor. We greatly doubt if it occurs to the west of the Precelly Mountains. We could never meet with it in the woods at Stone Hall, or in the large covers of Trecwn, which we

have visited in the summer on purpose to search for it. In the south of the county Mr. Tracy considered it scarce: "Although I can mostly procure a few specimens the latter end of April or the first week in May, I think they do not stay here to breed, for I have never found them later; and being so well acquainted with the voices of the other Warblers, the peculiar twitter of the Wood Warbler could not have escaped me." Mr. Dix has a very different account to give from his post on the Cardiganshire borders. Writing of this species, he says: "More generally distributed, and I think also more numerous, than in most parts of England. One is almost sure to meet with this bird in a plantation of beech and oak. It certainly prefers the beech to any other tree; I have invariably found them upon or near this tree when there are any in the plantation."

MELODIOUS WARBLER, *Hypolais polyglotta*.—Such, as we are informed by Mr. Howard Saunders, is the correct name of a delightful little songster that visited us at Stone Hall in the summer of 1886. It is the Western form of the Icterine Warbler, and is something like a Chiff-Chaff, differing, however, from that bird in having the under parts of a bright sulphur yellow. For so small a bird it possesses a very powerful and exquisite song, rich in clear, thrush-like notes. It took up its station day after day in an ash tree by the side of a lane adjoining our house, and there warbled so sweetly that people who had once heard it used to return again and again to listen. We watched it one day as it was dancing up and down the branch it was upon, fluttering its wings as we have also seen the Wood Warbler do while pouring forth its song, and singing as if in a very transport of joy. We have been asked "Why did you not shoot this bird so as to be sure as to your identification?" but who could have had the heart to butcher so sweet a minstrel? On the other side of the tree which the bird frequented was a dense woodcock cover, through which a small stream runs among a thicket of willows and furze. Here we searched repeatedly for the nest, feeling sure our little friend must have had a companion, but so thick was the cover we failed to find it, and we

were also disappointed in not detecting our charming songster the following spring, although there were many, besides ourselves, keeping a watch for his appearance.

SEDGE WARBLER, *Acrocephalus phragmitis*.—A common summer visitor. Next to the Chiff-chaff, perhaps, the most numerous of the soft-billed summer visitors in Pembrokeshire. When we were fishing in the Cleddy below our house in the spring and summer, we were always provided with entertainment by the Sedge Warblers that were very abundant in the tangled cover by the side of the stream through which we had to force our way. Their restless plunging into the bushes and out again, sometimes scolding at us, sometimes trilling a few notes of their babbling song, was most amusing. And every now and then we would start one from its nest. After this experience of the abundance of the bird in our locality it is curious to read that Mr. Tracy considered it scarce, and that Mr. Dix had only heard it in one place, "in some willow bushes near Cardigan." We do not consider that this is any proof of any inequality in the bird's distribution, but only that it points to these two excellent observers and naturalists not having had at hand the country that the Sedge Warbler alone frequents; swampy, bushy places, and the banks of brooks that are fringed with thick growth of brambles, furze, and other suitable cover for the bird to nest and harbour in.

GRASSHOPPER WARBLER, *Locustella naevia*.—A summer visitor, scarce and very local. We never detected the singular and not-to-be-mistaken song of this species at Stone Hall. The Rev. Clennell Wilkinson pointed out to us a field near his rectory at Castle Martin in a corner of which he had found a Grasshopper Warbler's nest several summers in succession, an instance of the attachment of the bird to a certain locality. Sir Hugh Owen has informed us that he has seen this species at Goodwick. Mr. Dix writes: "the first time I heard this bird in Wales was one afternoon in July, 1866—it was just within

Carmarthenshire, in a boggy place overgrown with alders and rushes—since then I have heard the bird near Whitechurch, in a similar locality. Last year two males came for a few evenings in July close to this house ; * they were in two small clumps of blackthorn about forty yards from each other ; they began their peculiar whirring note about dark, when I have stood within a few feet of them without their being the least disturbed.” The Grasshopper Warbler has been noted by the Rev. C. M. Phelps, near Tenby, and Mr. E. W. H. Blagg has informed us that he detected some there in June, 1887.

HEDGE SPARROW, *Accentor modularis*.—A common resident. In a hard winter when we were feeding numerous small birds at our dining-room window, a Hedge Sparrow asserted himself as king of the company, not allowing any of the Chaffinches, Tits, Green Linnets, &c., to touch the food until he had satisfied himself. This conduct in a bird usually so unassuming and gentle not a little astonished us, and it was also remarkable that the other birds submitted to his dominion. Mr. Tracy states : “ This species is very subject to warts on the beak and legs ; how can this be accounted for ? ” We have never met with one thus afflicted.

WATER OUZEL, or DIPPER, *Cinclus aquaticus*.—A common resident, to be met by every stream. The Dipper is one of the few birds that do not migrate, remaining faithful to his familiar stream throughout the year. Nor does he appear to be put out by the weather, however severe it may be. In one of the coldest days of the very hard frost in the winter of 1880 we were watching for wild duck by the Cleddy below Stone Hall, with our beard and moustache a mass of icicles, when we heard a soft and pleasing bird’s song evidently coming near to us, and looking in the direction from whence it proceeded were astonished to see a Dipper perched on a block of ice that was floating down mid-stream singing away as if he were in the height of enjoyment !

* Llwynbedw, Kenarth, Llandyssil.

Indeed, we must say that it has been under such surroundings that we have most often heard this Mark Tapley of a bird indulging in song. We often had the pleasure of being visited by Water Ouzels at Stone Hall, a little brook running through our grounds to feed our various ponds being the attraction.

BEARDED TITMOUSE, *Panurus biarmicus*.—A very rare occasional visitor. Although this very handsome species is more correctly a Reed Bunting than a Tit, we will not depart from the old custom of including it among the lively and beautiful Tits. We have authority for but one occurrence of it in the county. We are informed by Sir Hugh Owen that he saw some Bearded Tits "in reeds above Sealyham upper quarry bridge, about 1860." Since then we have had news of a more recent visit of these rare little birds, if not actually to Pembrokeshire, yet to Carmarthenshire, and but a mile or so over the border. Col. Mathew tells us that when he was residing at Castellgorfod, a little to the north of St. Clear's, he saw a pair of Bearded Tits there in November, 1891, among some alders that fringed a large wood. There was high rough grass and trash growing among the alders, and a little stream close at hand. In the following spring he saw a pair close to the house. One of them came suddenly, it was a beautiful male, and settled on a tall rush at the edge of a pond in the grounds, remaining there for some minutes and permitting itself to be closely approached. This almost countenances the supposition that the birds may have nested, and may still nest in that locality. If they do we trust that they will owe their safety to no one in the neighbourhood being aware of their rarity.

LONG-TAILED TIT, *Acredula rosea*.—A common resident. This minute species was very plentiful around Stone Hall, where the larch and spruce covers afforded the members of the Tit family both shelter and an abundance of the insect food they love. We frequently came across its beautiful nest in the woods, and noticed that the materials employed by the tiny architects varied

with the situation. In an oak the nest would be constructed of dead oak leaves and the grey lichens from the trunk of the tree ; in a willow overhanging the stream the nest was made of moss and Pheasant's feathers ; the bright feathers of a Cock Pheasant's neck were stuck around the tiny aperture as if for decoration.

GREAT TIT, *Parus major*.—A common resident. In cold weather in the winter, by hanging large lumps of suet by a string in front of our dining-room window, we used to provide food for the Tits, and great entertainment to ourselves in watching their lively gestures. There would be often three or four of them on the string at once, either sliding down towards the food, or waiting their turn to feast on it, and the restless little birds would be constantly coming and going throughout the day. Directly the suet was finished they would tap at the window to inform us that more was required ; and, at the beginning of the winter they would even come and peck and flutter against the glass to let us know that, in their opinion, the time was come for us to hang out the expected food as usual. The Great Tit, the Blue Tit, and the Coal Tit, were all daily visitors as long as our relief was extended to them. The Marsh Tits never once came to the suet, although there were plenty of them in the shrubberies close at hand. We used to find numerous nests of all the common English Tits in our garden ; the Great Tit, the Blue Tit, and the Coal Tit always building in holes in walls, while the Marsh Tit preferred a hole in a tree.

COAL TIT, *Parus britannicus*.—A common resident. Mr. Dix considered it more common than he had ever met with it in England, and in our locality it was certainly an abundant species. The nests we found were always lined with a thick welt of rabbit's fur.

MARSH TIT, *Parus palustris*.—A common resident, very numerous around Stone Hall. Curiously enough, Mr. Dix was never able to detect it in his remote corner of the county. We have

noticed that all the species of Tit are greedily fond of the oily seeds of the sun-flower. One beautiful summer when we had quite a plantation of these gaudy blooms we observed numerous Tits apparently searching them, as we thought, for insects all day long, and, as we knew them to be full of earwigs, we considered that they were hunting for these insects, and, like the Robins, regarded them as special dainties, but on looking closely at the flowers, we found that the *seeds* were what the little birds were coming for, nor did they cease to visit the plants as long as there was a single seed remaining. A pair of Marsh Tits once had their nest in a hole in a willow tree a few yards from our house. Standing close by the tree and keeping perfectly still, we kept watch upon the Tits when they were feeding their young. Although we had our shoulder within a few inches of the entrance to their nest they passed in and out quite fearlessly, one or other of the parent birds arriving about once a minute with food. The number of the young within, and the minuteness of each meal, some tiny spider or caterpillar, were the occasions of this frequency, and it also bore witness to the abundant supply of insect life close at hand.

BLUE TIT, *Parus cæruleus*.—A common resident, to be seen in our shrubberies every day in the year. In severe weather these little birds seek shelter, coming boldly into our house or into the greenhouses. In the latter they did good service in hunting out spiders and aphides.

NUTHATCH, *Citta cæsia*.—Very rare in Pembrokeshire, where we never once saw it, and are doubtful if it can be classed among the resident birds. In his many years' experience Mr. H. Mathias has never met with it. Mr. Dix omits it in his list. We think, therefore, Mr. Tracy was mistaken when he wrote that it was "tolerably common." The only Pembrokeshire specimen of which we have knowledge is one that was shot by Baron de Rützen's gardener at Slebech, Sept. 7th, 1893; for this information we are indebted to Mr. F. Jeffreys, the Haverfordwest bird-

stuffer. In the adjoining county of Carmarthenshire the Nuthatch is not uncommon. We saw a brood of young Nuthatches in the grounds of Abergwili Palace in the summer of 1885.

WREN, *Troglodytes parvulus*.—A common resident, very abundant in our grounds, where we used to detect numerous nests. One we found was lined with the feathers of a Sparrow Hawk's breast, so the birds had evidently availed themselves of one that had been shot in an adjoining plantation. A pair of Wrens passed the whole of one severe winter in one of our green-houses where they seem to have found plenty of food.

WHITE WAGTAIL, *Motacilla alba*.—A summer visitor, no doubt often overlooked and confounded with the next species. Writing as long ago as 1850, Mr. Tracy says: "I am convinced that a few young birds of the Continental White Wagtail appear on our coasts in the months of September and October." But the birds pass south again before either of those dates. We saw a flock of from 20 to 30 White Wagtails sitting on the telegraph wires by Treffgarne Bridge towards the end of August, 1884, and the birds were then evidently migrating. On 24th June, 1886, we saw a pair of adult White Wagtails close to Clarbeston Railway Station.

PIED WAGTAIL, *Motacilla lugubris*.—A common resident. Mr. Dix writes: "I believe we have more during the winter than in the summer. In September I noticed two or three parties of from fifteen to twenty, which, I believe, were migrating; they appeared to consist of two or three families. I have, invariably, during the winter, seen this bird in pairs, male and female, so there is some reason to think they pair for life. They seem particularly fond of being in a sheep-fold, seldom entirely leaving it."

GREY WAGTAIL, *Motacilla melanope*.—A common resident; equally abundant throughout the year. We agree with Mr.

Dix in considering this beautiful species, "the Common Wagtail" of Pembrokeshire, breeding by every little stream. We have found the nest within a few feet of our hall door at Stone Hall.

BLUE-HEADED YELLOW WAGTAIL, *Motacilla flava*.—A rare summer visitor from the south. Writing to us from Dale on 18th October, 1886, Mr. H. Mathias informs us: "I am now able to say for certain that the Greyheaded Wagtail is to be found in Pembrokeshire. My friend, the Rev. Lyte Stradling, an ornithologist, told me one day, when we were shooting together, and talking over Pembrokeshire birds, that he had seen a pair of Greyheaded Wagtails on the flat, between the lime kilns and the small bridge, dividing the parishes of Marloes and Dale, on more than one occasion, and yesterday afternoon there was one running about the road in front of my abode at this place. I had a good opportunity of watching it, for it was not five yards from my window to the stream of water by the side of the road, along which it was seeking for food. From the brightness of its colour, I am disposed to think it was an adult male."

YELLOW WAGTAIL, *Motacilla raii*.—A passing visitor in spring and autumn; rare in Pembrokeshire, and occurring only in the southern parts of the county; we have never ourselves seen it. Mr. Dix writes: "I have only once been able to identify this bird in this district, when five were seen on 24th August, 1867. Mr. Tracy, of Pembroke, says: "Tolerably common in small flocks, at the latter end of August and September, frequenting pasture fields where cattle are grazing. I have oftentimes wondered how they avoided being trodden on by the cattle. Good old specimens are very scarce." It is very doubtful if this species nests within the confines of the county.

MEADOW PIPIT, *Anthus pratensis*.—A common resident. Mr. Dix says: "Breeds on the mountains and bogs. I have seen this bird on the tops of the mountains, where, excepting the

Skylark, it is the only bird to be seen ; in such places I have often heard it singing, as it stood upon a stone or a bunch of heath. About September, or the beginning of October, it comes down into the more sheltered parts, following the plough in small flocks." He adds : " They are constantly to be found in the sheep-fold, running fearlessly about."

TREE PIPIT, *Anthus trivialis*.—A common summer visitor. Mr. Dix writes : " Generally distributed, but is by no means numerous." We used to see it every summer at Stone Hall, and noted it at St. David's, &c., &c.

ROCK PIPIT, *Anthus obscurus*.—A common resident, only on the coast. Watching some Rock Pipits one day as they were running about at the foot of some sandhills we were amused by their gestures, which not a little imitated those of the common Ring Plover. They would run rapidly a few paces, and then, like that bird, bring themselves up with a sudden jerk, stand still, and then run on again for a short distance, again to stop, and run on. Mr. Mortimer Propert, of St. David's, one summer took a nest of the Rock Pipit on the Bishop's Rock. It was extremely compact, and constructed of bents thickly lined inside with horse-hairs. To procure the horse-hairs the Pipits must have flown to and fro over three miles of water to Ramsey Island, the nearest point where they would find a horse. We have never seen any of the vinous-breasted, greyer-backed Rock Pipits, in Pembrokeshire, that are summer visitors to this kingdom from the north of Europe, and go by the name of the Scandinavian Rock Pipit, and are not very rare.

GOLDEN ORIOLE, *Oriolus galbula*.—A very rare summer visitor from the south. We are informed by Sir Hugh Owen that he saw a Golden Oriole at Goodwick in May, 1870 ; and the Rev. C. M. Phelps, in the " Tenby Guide," is an authority for this beautiful bird having been seen elsewhere in the county.

GREAT GREY SHRIKE, *Lanius excubitor*.—A very rare winter visitor. This species is far from rare in the winter on the northern and eastern coasts of England, and, like many other birds visiting this kingdom from the east, very rarely penetrates so far to the west as to reach the south-western corner of Wales. Indeed, the only county example we know of is one we have been informed of by Mr. H. Mathias, that was killed some years ago by the late Rev. W. Webb-Bowen, of Camrose, at Wolfsdale in that parish. This is the specimen that was in the collection of Mr. R. J. Ackland, at Boulston.

RED-BACKED SHRIKE, *Lanius collurio*.—A summer visitor, very rarely seen in the north of the county. Mr. Dix states that he had only once seen it in his district. When we used to drive into Haverfordwest from Stone Hall we frequently saw a pair of these birds on the telegraph wires by the roadside, as we drew near to the town. But some seasons would pass without our seeing any. Mr. Tracy thought the Red-backed Shrike was "common, and pretty equally distributed in pairs over the county," but we must join issue with him, as we have never once seen a Red-backed Shrike in the Fishguard or St. David's district, nor, indeed, at any place in the north of the county. Mr. Jeffereys informs us that a pair nest annually in some low bushes on the Black Rock, a mile or two out of Tenby, and that he has never heard of any others in the Tenby district. And Mr. E. W. H. Blagg tells us that he found a nest, with four fresh eggs, June 21st, 1887, at Tenby.

WAXWING, *Ampeelis garrulus*.—A rare, irregular, winter visitor. This beautiful bird, at irregular intervals, makes its appearance in flocks on the eastern coasts of England, but very rarely wanders so far as to our western counties. In those years when they arrive in unusual numbers (as they did in the winter of 1849-50), a few are generally recorded from all parts of the kingdom, so that we consider it highly probable that Pembrokeshire may have shared in one or other of these exceptional

visitations ; but the species is not included in any lists we have received, nor do we know of a specimen in any collection. Mr. Dix mentions one that was obtained just over our borders in Carmarthenshire : " I am informed by my friend, Mr. J. Phillips, of Newcastle-Emlyn, that a single bird of this species was shot a few years since near Llandyssil, in Carmarthenshire."

SPOTTED FLYCATCHER, *Muscicapa grisola*.—A common summer visitor. This little bird was very numerous around us at Stone Hall, where one summer we detected six or seven of its nests close to our house.

PIED FLYCATCHER, *Muscicapa atricapilla*.—A rare summer visitor, only occasionally noticed. We have never met with it in the county. Of late years the Pied Flycatcher has been ascertained to be far from an uncommon bird in many districts in northern and central Wales, generally frequenting woods at some elevation above the sea-level on mountain sides, where it nests in holes in oak trees. But we have no record of its nest ever having been obtained in Pembrokeshire, where it appears to be only a rare passing visitor. There are specimens in Lord Cawdor's collection at Stackpole Court that were obtained in the neighbourhood, and Mr. Dix was informed by Mr. Tracy that the bird was occasionally seen in spring and autumn. It is not included in the lists of county birds supplied us by Mr. H. Mathias and Sir Hugh Owen.

SWALLOW, *Hirundo rustica*.—A common summer visitor. We used to greet the Swallows on 10th April, as an average date, at Stone Hall, where they were always numerous, and nested in all our outbuildings, bringing off two broods of young in the course of the summer. When the May Fly was "up" on the Cleddy below our house it was a grand time for the *Hirundines*. In company with numerous Sparrows and Chaffinches they gathered to the feast, and most eagerly pursued the chase of the dancing

ephemeræ. The tiny Sand Martins appeared to have no difficulty in bolting them, and we could hear the snap of their mandibles as one disappeared inside. One day a Swift in headlong pursuit collided against our head and fluttered stunned to the ground, but soon recovered and rose again on wing. The greater number of our Swallows left us in North Pembrokeshire about the middle of September; some had gone before in August, and very few remained in the early days of October.

MARTIN, *Chelidon urbica*.—A common summer visitor. As Mr. Dix also observed in his district, the Martins were not so numerous with us as the Swallows, but we generally had a few pairs nesting about the house. They arrived about a fortnight after the Swallows, and departed again in detachments in September and October.

SAND MARTIN, *Cotile riparia*.—A common summer visitor. The Sand Martins were generally first seen some day in the last week of March, flying about Welshhook Bridge, below our house. They were always abundant, perhaps more so even than the Swallows, nesting in banks and in the sides of gravel pits and old quarries. Owing to the want of suitable nesting places Mr. Dix failed to observe this species in his district, writing: "I have only once seen this bird, where four or five were skimming over the river by Cardigan Bridge."

TREE CREEPER, *Certhia familiaris*.—A common resident. To be seen in our grounds at Stone Hall every day in the year. Although numerous, we but seldom detected the nest, which was usually placed behind the ivy creeping over some old tree, where the moss of which it was constructed exactly imitated the colour of its surroundings and aided in its concealment.

GOLDFINCH, *Carduelis elegans*.—A common resident. Still abundant, in spite of the persecution sustained from bird-catchers, who take great numbers in the autumn when the birds

collect upon the coast. We have been informed that thirty-three dozen were caught at one time at Fishguard. Mr. Dix says : " I have seen as many as sixty or eighty in a flock in the autumn and winter, feeding upon the seeds of the grasses in the meadows." One summer we detected six nests in our grounds ; the raspberry canes and some old plum trees covered with lichens, in the kitchen garden, providing the favourite sites.

SISKIN, *Chrysomitris spinus*.—A winter visitor ; rare. Mr. Tracy says : " Taken occasionally in the autumn feeding on the seeds of the birch and alder." Not included by Mr. Dix, but in the list supplied us by Mr. H. Mathias. The bird-catchers catch a few, but not every winter, and inform us that it is never numerous. A flock of about twenty appeared in an alder-bed at Stone Hall at the beginning of December, 1866.

GREENFINCH, *Ligurinus chloris*.—A common resident. Only too numerous in our grounds, where in the old ivy-covered walls there were always plenty of nests. We were no admirers of this bright-plumaged bird, because of his ceaseless attacks upon our garden seeds in the spring. All had to be netted over, or nothing would have escaped him. One pair of Greenfinches had the audacity to build their nest immediately above our seed bed, but they did not meet with the success they had, doubtless, anticipated.

HAWFINCH, *Coccothraustes vulgaris*.—A very rare winter visitor. In Mr. H. Mathias' list. We saw a pair in the collection of the late Mr. Fortune, at Leweston, that he had shot near his residence. Sir Hugh Owen obtained one at Llanstinan in the spring of 1854. A Sparrow-hawk, shot by the late Baron de Rützen, at Slebech, September 13th, 1889, was in the act of carrying off a Hawfinch, which was secured with it. Not included by Mr. Dix.

HOUSE SPARROW, *Passer domesticus*.—A common resident, but rather scarce in the " mountain " districts. Mr. Dix writes :

"Comparatively a scarce bird; during the severe weather last February, I did not notice more than three or four together at any time in the yards. Nothing has struck me more than the scarcity of this bird." When we first went to reside at Stone Hall we had no Sparrows there. At length one or two appeared, and their increase was rapid. It was not until we one day visited Llanrian, on the north coast, that we saw Sparrows in anything like the numbers to which we have been accustomed in England. The old church tower there is thickly covered with ivy in which hundreds of Sparrows were harbouring and nesting. The absence of cornlands, and the sparsely inhabited country, in which isolated mountain farms are far apart, would account for the comparative scarcity of the House Sparrow, in most places a far too abundant pest. Mr. Jefferys informs us that the House Sparrow is by no means common at Tenby.

CHAFFINCH, *Fringilla cælebs*.—A common resident, by far the most numerous, after the Common Linnet, of the whole finch tribe in the county. Mr. Dix thought it "by far the most numerous of the *Controstres*, exceeding in numbers all the others combined." He adds that he had never noticed any separation of the sexes, or addition to its numbers during the winter. He thought the Chaffinch the only small bird that, in his district, was as numerously represented as it is in the south and east of England. We do not agree with him in this opinion. The Common Linnet and the Yellow Hammer, not to mention several other small birds, are quite as abundant in Pembrokeshire as we ever met them in the English counties we were familiar with. At Stone Hall our Chaffinches were remarkably tame, very often coming into the house to pay us visits, and they would build their nests as close to us as they could in the creepers trained around our windows. One pair that did so came in daily at the dining-room window to feed on any seeds that fell on the floor from our various cages, and finding the eggs in the nest to be unusually large and brightly coloured, the effect, we considered, of the hen bird's good feeding, we appropri-

ated one or two of them for our collection. "During the severe winter in January, 1867," writes Mr. Dix, "several Chaffinches were frozen to death. On the night of the 14th the thermometer fell to five degrees below zero ; the next morning four of these birds were brought to me quite dead and stiff,—all of them had their heads under their wings as though they died asleep,—doubtless starvation had something to do with it, but I am persuaded the cold killed them. The 30th October following, I saw the largest flock I ever noticed. There must have been five or six hundred birds ; they were in a small field close to the mountains ; I watched them for some time without seeing a single bird of any other species."

BRAMBLING, *Fringilla montifringilla*.—A winter visitor ; rare and irregular. We had so many beech trees in our grounds, the mast of which is a favourite food with this species, that every winter we were on the watch for it, confidently expecting its appearance. But we never once saw it, and it seems to be a rare bird in Pembrokeshire—at least, in the north of the county. It is not included by Mr. Dix. Mr. Tracy says that it is "very common some winters, feeding in flocks with Chaffinches in farmyards, and in woods on the beech mast." Sir Hugh Owen has obtained specimens at Goodwick, and the Rev. Clennell Wilkinson at Castle Martin ; and Mr. H. Mathias has also met with it. We have also a note of its occurrence near Tenby.

LINNET, *Linota cannabina*.—A common resident. This, one of our favourites among the smaller birds, because of its general cheerfulness and bright little song, is very numerous with us, as might well be expected in a county so abounding in furze. We used to detect a number of nests in all our brakes, and in the autumn and winter never failed to observe large flocks in the stubbles and turnip fields of "Brown" Linnets, as they are then aptly called, because of their uniform grey brown winter plumage.

LESSER REDPOLL, *Linota rufescens*.—A resident in small numbers, and a common winter visitor. A pair were seen, evidently nesting, by the late Mr. Stokes, of Cuffern, in the spring of 1887, at Ferny Glen, near Roch, in a larch tree. Small flocks regularly appear in the autumn, and one of about a dozen birds generally visited our gardens every winter, remaining with us until the spring had well advanced. Mr. Dix states: "I have seen one flock of about twenty this winter, on 3rd January; they were feeding on some alders near Cardigan." Mr. Tracy considered this small species "rare," adding, "a few frequent the mountainous part of the county." Mr. Jefferys, of Tenby, has informed us that among some eggs sent to him from Boncath to be named, was one marked: "Found here in May, nest like Goldfinch," which proved to be an egg of the Lesser Redpoll.

BULLFINCH, *Pyrrhula europæa*.—A common resident. In the spring and summer the birds are, for the most part, concealed in the leafy copses where they are nesting, and, as Mr. Dix well remarks, they appear to be more numerous during the winter, because they then leave the woods. We had always nests in our grounds at Stone Hall, and never interfered with these delightful little birds, in spite of the bad character they bear with gardeners for their destruction of fruit and other buds. One winter our paths were littered with the husks of our lilac buds; a flock of Bullfinches had been frequenting the bushes for days, and we thought sorrowfully that our garden in the following spring would miss the sweet perfume of the flowers; but, to our surprise, we had as good a show of bloom as we had ever had, so we then concluded the birds had only done us good by a judicious thinning of superabundant buds. We are never without several Bullfinches in our aviary, the larger Russian variety and our homely "Hoop," because there are no other little birds that are so easily tamed and become so affectionate. Mr. Tracy remarks: "Bullfinches, in confinement, if fed on hempseed, soon change colour, and in two or three years become black. One kept for several years at an inn in Pem-

broke was quite black, and afterwards changed again to his original colour, which was considered an ill omen, as the landlord died the same year."

[**PINE GROSBEAK**, *Pinicola enucleator*.—Although we believe that this north European species has no claim to a place on the list of Pembrokeshire birds, yet we are obliged to admit it because of a piece of ancient history of which it would not do to evince our ignorance. In Mr. Harting's useful "Handbook of British Birds," at p. 113, it is stated that "several" of these birds appeared in Pembrokeshire "date not mentioned, Fox, Synops. Newcastle Mus., p. 65." And the following appears as a note in Professor Newton's edition of Yarrell's "British Birds," vol. ii., p. 178: "A flock of about a hundred unknown birds came to a hempyard in Pembrokeshire in Sept., 1694, as reported by a Mr. Roberts to *Llhwyl Phil. Trans.*, xxvii., pp. 464, 466, who suspected they were 'Virginia Nightingales' (*Cardinalis virginianus*), but later writers suggested they were Pine Grosbeaks." They may have been anything; if we might venture a guess, we should say "Common Crossbills."]

CROSSBILL, *Loxia curvirostra*.—An irregular visitor, at all seasons of the year. The absence of apple orchards in Pembrokeshire may partly account for the infrequency of the appearance of the Common Crossbill in the county. We know of only two records of its occurrence. Mr. Tracy met with a single specimen, one sent to him about 1858 from Angle, a village on the coast to the south-west of Pembroke, and Mr. Dix states that during the autumn of 1868, a year when Crossbills were observed at several localities in the West of England, a few were seen in the lower part of the county, and that he heard of three having been killed near Stackpole Court.

CORN BUNTING, *Emberiza miliaria*.—Resident, but local, and never seen far from the coast. Is, perhaps, more plentiful immediately around St. David's than anywhere else in the county. We have never met with it more than five miles

inland. Mr. James Tracy states that it is plentiful at Pembroke all the year round. Mr. Dix writes: "As I was driving over the mountains to Narberth last February, I counted five on one bush, and saw at least a dozen others." Mr. E. W. H. Blagg tells us that he found the Corn Bunting very abundant in the neighbourhood of Tenby.

YELLOW HAMMER, *Emberiza citrinella*.—Resident. One of our most abundant small birds. They are believed by the Welsh people to encourage snakes to enter their nests to devour the young birds, and are on this account held by them in great aversion. In other parts of the world this species has evil things reported of it in the folk-lore, and is much persecuted.

GIRL BUNTING, *Emberiza cirlus*.—A rare occasional visitor. No record of its having nested in the county. There are specimens in the Stackpole Court collection. Is stated to have been seen near Tenby, and is included in Mr. Mathias' list. One shot, according to Rev. C. M. Phelps, near Solva. Mr. Howard Saunders, who spent the summer of 1893 at Dinas, in the north of the county, has informed us that while he was there he one day "had a perfect view" of a male Cirl Bunting. We never ourselves detected one, nor could Mr. Dix include this species among the birds noted by him in his district. In their long experience, as keen oologists, Dr. Propert and his sons never met with the Cirl Bunting in the neighbourhood of St. David's.

REED BUNTING, *Emberiza schaniclus*.—Resident, scarce. A few on the Cleddy, beneath Stone Hall, where we have found the nest. Also to be met with on the furze on bogs. We one day shot a very pretty fawn-coloured variety on Brimaston Mountain. Mr. Dix thought this species "by no means common," adding, "a few are seen by the rivers in suitable localities." This is rather a solitary bird, one we never remember to have seen in flocks.

SNOW BUNTING, *Plectrophenax nivalis*.—A winter visitor, rather rare. Never seen by us. Sir Hugh Owen has met with it near Fishguard. Mr. Tracy says, “often obtained in a severe winter.” In Mr. Mathias’ list, but does not appear to have occurred to Mr. Dix. “White Buntings” are reported to have been seen about the rocks at the Smalls Lighthouse on October 17th, 1884. These were doubtless Snow Buntings migrating.

STARLING, *Sturnus vulgaris*.—Common resident ; vast arrivals in the autumn. When we took up our residence in the county in 1880, the Starling was only then a nesting species in a few localities. We heard of one or two instances of its breeding at St. David’s, but there were no nests in our immediate neighbourhood. Before we left Stone Hall we had numerous nests in hollow trees in our grounds, and the bird appeared to be rapidly establishing itself throughout the county. Its numbers in the autumn and throughout the winter are almost beyond belief. A large plantation of laurels at Stone Hall close to the house was occupied as a roosting place, and had to be destroyed on account of the offensive smell caused by the birds. Another great roosting-place in our neighbourhood was in a small fir plantation at the back of the singular Treffgarne Rocks. Here, as the trees failed to supply sufficient perches to the birds, the heather on the mountain adjoining was occupied by them for several acres, and the ground was whitened over by their mutings. The flocks of an afternoon, as the birds collected to fly to their roosting places, were a sight to behold. The air was almost darkened as the immense concourse passed, and the sound of the wings could be heard at a considerable distance. On its way through the sky the vast assemblage indulged in wonderful evolutions, at one time suddenly contracting into the form of an enormous balloon ; at another time, as suddenly expanding, it shot out into a gigantic black ribband drawn across the heavens. Numbers roosted in the rhododendrons in our grounds, and as flock after flock arrived, we beheld them darting suddenly vertically downwards on to their perches, where there would be some confusion and chattering before

peace and quiet prevailed. The flocks feeding on our lawn were never without some few cripples, either one-legged birds, or birds deficient in a toe or two ; and we used to wonder whether they were liable to foot disease, or whether the lame birds had been injured by some cruel shot fired (perhaps hundreds of miles away) "into the brown" of the flocks. Writing as long ago as 1866, Mr. Dix says of the Starling : "It arrives about the middle of October in large flocks, leaving again in February. One pair stayed and bred about a mile from here last season ; it was the only instance I heard of. It seems strange that they should leave during the breeding season ; it cannot be from the want of food, as in a damp climate like this worms are plentiful, and stone walls, thatched cottages, and ruinous buildings are common enough to accommodate them." Mr. Tracy, giving his experience of the Starling in the south of the county about 1850, speaks of it as a winter visitor, arriving in October in immense flocks, and adds : "A few pairs remain and breed here, and during the last four or five years [the nesting birds] have increased very considerably." Mr. Jefferys, however, informs us that the Starling is decidedly rare during the breeding season in the neighbourhood of Tenby. We are very fond of the Starling. He is not only a cheerful and lively bird, with a most amusing song that imitates very many other birds, and very domestic in his habits, loving to approach and haunt our dwellings, but he is at all times harmless, and useful in devouring countless injurious grubs, and his occasional thefts of fruit we are most willing to condone ; and then we have, from long observation, formed a very high opinion of his peaceable disposition. Watching the large flocks feeding on the pastures, how rarely any of the birds appear to quarrel. As they search for food those in the rear fly over to the front, and are then superseded by those behind flying over them in turn, and so the flock advances, eagerly examining and probing the grass with their beaks on the hunt for beetles and worms, and when one bird makes a capture those nearest immediately run up to search more diligently the lucky spot, while all the time

their operations are conducted with perfect friendliness and amiability. One hard winter, when day after day we fed numerous starving birds at our dining-room window, we had among them a little flock of about a dozen Starlings, and we never observed any pushing or crowding or contention among them. However hungry they might be, each bird seemed to give way to the other, and we thought their conduct was a perfect pattern of gentlemanly behaviour, and the good opinion we had always held of the Starlings was greatly confirmed.

ROSE-COLOURED PASTOR, *Pastor roseus*.—A rare occasional visitor in the spring and autumn. In the Tenby Guide the Rev. C. M. Phelps states that the Rose Pastor has been seen in Pembrokeshire without specifying either locality or date, but we believe it was in the neighbourhood of St. Florence. The Rev. Clennell Wilkinson has informed us that he is pretty certain that he has seen a Rose Pastor at Castle Martin.

CHOUGH, *Pyrhocorax graculus*.—Resident. There can be no doubt that 50 years ago the Chough was a common bird on the coast all the way round from Tenby to St. David's Head, and on towards Cardiganshire about Dinas, &c. It is now rapidly becoming scarce, and if it were not for its sagacity in building in holes and crannies of inaccessible cliffs, it would long ago have been exterminated, as all its eggs would have been taken to meet the demands of collectors. In describing his birds-nesting experiences, our friend the Rev. C. M. Phelps well says: "If the Raven's nest be difficult to get at, much more is that of the Chough. Like the Raven he chooses the highest cliffs; but he does more. He finds out all the deepest holes, and there he places his nest out of sight and out of reach. And should there be a dark chasm or cauldron anywhere in the neighbourhood, in the darkest depths of that chasm the nest and eggs will be securely hidden. In one instance, at St. David's, the nest was built in the roof of a cave. At low tide only could the cave be approached, and then, to get into it a brother oologist had to strip and swim across a deep, cold pool, only to find the nest far

beyond his reach in a deep hole in the roof of the cavern. In another case, also at St. David's, the nest was placed under an extremely over-hanging cliff of purple silurian, in a hole six or eight feet deep. This hole was some 40 feet from the rocks below, and was impregnable, as it could neither be reached from the summit nor from the shore. I have known a third placed in a narrow chasm, 150 feet in depth, and with walls of rock as sheer as the sides of a house." In former days, Mr. Phelps says, according to tradition, the Choughs nested in the ruins of the Bishop's Palace at St. David's, until they were driven out by Jackdaws, but as the nests could there have been easily robbed, he suspects they were "human Jackdaws." The nest, he states, is large, and lined with wool. He one day saw a large flock of Choughs wheeling about the lofty rocky promontory known as Dinas Head. We have seen the Chough on Ramsey Island. His longer wings and more buoyant flight serve easily to distinguish him from the Jackdaw, and his cry is also unmistakable. Our friend, Mr. Mortimer Propert, of St. David's, possesses some beautiful clutches of Chough's eggs, all taken by himself on his romantic coast. Some of his eggs are the largest we have ever seen, and are slightly pyriform, like varieties we have seen of other species of *Corvidæ*. Young Choughs are very easily tamed, and are very familiar and impudent. One kept by Mr. Tracy was omnivorous in its diet, and liked to have its head scratched by children. "When alone he is constantly chattering, squalling, and making a variety of noises, but I have not heard him distinctly articulate any word yet, although he appears equally capable with the Parrot." Mr. Samuel Gurney, writing to the *Zoologist* for 1857, describes the ruins of Manorbeer Castle, near Tenby, as being at that date frequented by Choughs "which bred there in great abundance." He was told by the village schoolmaster that in the breeding season and in the winter the Choughs were very tame, collecting in numbers around the school-room door at the time the school broke up in order to pick up pieces of bread thrown to them by the children. An anecdote was told him of one

of the Choughs that had been brought up by some children who lived about two miles from the village. Whenever they left home to go to school the bird would precede them, and arrive there a few minutes after they had started, and some twenty minutes before them. This it did so regularly that the master knew when the children might be expected." Mr. Charles Jefferys, of Tenby, informs us that he believes the Chough still breeds at the back of Caldy, *i.e.*, on the channel side of the island. They certainly did some four or five years ago, and in the spring of 1893 he saw a pair flying about the adjacent island of St. Margaret's that had come from the direction of Caldy.¹ During the ten years he has resided in Tenby he has never known any eggs of the Chough, or young, to be taken in the immediate neighbourhood, and, as far as he is aware, no birds have been killed on Caldy; still, they each year become rarer. Six or seven years ago he used to see them pretty often about the cliffs between Tenby and Lydstep, but very rarely sees one now. A friend of ours who was paying a summer visit to Tenby recently tells us that he shot a Chough on the beach there that was flying at a considerable distance from him in the midst of a flock of Jackdaws. Apart from the persecution they meet with, the Choughs appear to be dying out in Pembrokeshire just as they are in Cornwall and Devonshire, where in former years they were equally numerous. When he was staying at Tenby in June, 1887, Mr. E. W. H. Blagg tells us that he saw several old Choughs on the coast by Giltar.

JAY, *Garrulus glandarius*.—Resident; not common. In a county with so few woods as Pembrokeshire this bird of the coppice would naturally be somewhat scarce, and in the woods where he occurs he is, unfortunately, the object of constant persecution at the hand of keepers. We had plenty of Jays around us at Stone Hall, and derived constant amusement from their clever

¹ In the Report of the Migration of Birds, as observed at Lighthouses, for 1881, Mr. Ebben writes from Caldy Lighthouse: "The Chough breeds upon the island, and never goes away."

mimicry of other birds. So cleverly did they copy the mating notes of our friends the Brown Owls, that we have frequently gone out on our lawn to look up into a tree expecting to see an Owl upon one of its branches, when an impudent Jay has fluttered out. We took a young one out of a nest in the shrubbery one year, and brought it up in a cage, side by side with an accomplished Ring-necked Parrakeet (*Palaeornis torquatus*). The Jay soon learned all the Polly's words, and would repeat them in the Polly's ridiculous voice, to the great indignation of that bird, who for a long time sulked in silence in consequence. One summer we had quite a plague of rats and field mice in our kitchen garden, and all our peas were being fast devoured. To destroy these pests we put poisoned pieces of bread about the garden, and, unfortunately, these were seen and carried off by the Jays, the result being that we found their dead bodies lying all over our grounds. After this we saw no Jays for several years. The survivors not only left us, but must have represented to their fellows that our covers were dangerous, and it was only after a long interval that confidence was restored, and any Jays returned to us.

MAGPIE, *Pica rustica*.—A common resident. Very numerous about all the wild and unpreserved districts of the county. Such numbers used to resort to our covers to roost that one winter we shot many of them, and the rest, taking the hint that we did not desire their presence, left us for a time. When we first waged war against them we were astonished at their indifference to our gun. We shot two or three out of a tree, and the others perched on it only craned their necks towards us, keeping up a great chattering, and never thought of flying away. We had many lying dead upon the ground before there was any attempt to escape. It was not until after several nights of slaughter that the birds judged it to be advisable to give our woods a wide berth. Magpies are great devourers of eggs, young birds, &c., and it was on account of our Pheasants that we wished to frighten them away. In severe winters they are

almost the only birds that keep sleek and fat, as they then feast upon the starving smaller birds. Mr. Dix writes of the Magpie: "Very common, but so readily destroyed that I fear it will soon be a rarity; still, as there are large tracts of country without a gamekeeper, it has a chance for the present. It is a very destructive bird, and in many places is quite a pest. I have heard of a place, in the extreme south of the principality, where they used to congregate at night like Rooks: it took all the keeper's time to watch them till some poison was laid, and the following morning he picked up two or three barrows full of the dead birds. The country people are very superstitious, finding omens in numberless occurrences, and this bird is most carefully watched, as upon the number seen together, the direction of their flight, &c., depends a great deal of good or bad luck."

JACKDAW, *Corvus monedula*.—A common resident. Very abundant on the cliffs, about all old buildings, such as the ruins of the Bishop's Palace at St. David's, Pembroke Castle, &c., about isolated dwellings in the wilder part of the county, where the birds fill up all the chimneys with their nests, and in doing this were a great plague to us at Stone Hall, and nesting also in hollow trees. To be seen with Rooks robbing the grain in the autumn from the stooks in the corn-fields. It is the custom in Pembrokeshire for the stooks to be left out a month or six weeks before "leading in," and the birds have thus an opportunity to take their full tithe. Nor do they neglect to attack the ricks in the farm-yard, and we were often compelled to drive them away by shooting at them. In spite of all their mischief the Jackdaws are great favourites of ours, and we always enjoyed seeing them and watching their lively gestures on the coast, where their noisy chatter would be greatly missed. At St. David's gardening operations, especially in the Deanery garden, are carried on under great difficulties, owing to the impudent thefts of the Jackdaws that swarm there at all times of the year; and little can be had in the way of fruit or vegetables without careful pro-

tection by nets, &c. Fishing tackle and hooks, and a great variety of curious things, have been found in the Jackdaws' nests in the ruins of the Bishop's Palace at St. David's.

CARRION CROW, *Corvus corone*.—A common resident. In the "mountain" parts of the county this destructive and mischievous bird is so numerous as to be quite a pest. He is always thieving, and on the watch for newly dropped lambs, young rabbits, wounded game, eggs of all kinds, chickens, &c. Great used to be our indignation at finding throughout the spring freshly sucked Pheasants' eggs lying everywhere about our covers. From the bare district around us the Crows would gather in our plantations at the nesting season, vexing our ears all day long with their discordant croaks. We never left them alone, and it was only when the nest was so successfully concealed as to escape our search that the black marauders were able to bring out a brood. When the young are first out of the nest they keep together for some weeks, and are then to be easily approached and shot. One spring we took over twenty nests in our small plantations, and had a grand series of seventy Crows' eggs as the result. One nest, cleverly hidden in an ivy-covered tree, was detected owing to the shells of Pheasants' and Moorhens' eggs, more than a dozen lying on the ground beneath. Most of these eggs still contained the whites, showing that it is the yelk only that the old birds carry in their beaks to their precious young. A Crow's nest is a veritable fortress, constructed of such a mass of sticks and twigs as to be quite impenetrable to shot if it is fired up at from below. It is closely and thickly lined with sheep's wool, and is such a perfect nest as to be gladly adopted by various other birds when they have the chance, such as Brown Owls, Kestrels, Sparrow Hawks, &c. Carrion Crows are devoted parents. Cunning as they are in keeping out of danger at other times, we have frequently had them fly boldly up to our gun when we have been near the nest containing their fledgelings. In dry weather in the middle of the summer we used to see the Crows searching the shallows of the Cleddy for fresh water mussels and

small trout. In a long continued drought they suffered severely, and numbers would be found lying about dead. In his district, Mr. Dix states that they went by the name of the "Farmers' Crow," and were terribly destructive, particularly to the young lambs of the mountain sheep, and adds : " It is surprising how quickly they kill them ; stealing upon them when asleep they effect their object by first tearing the eye out, and by repeated blows through the socket. They generally attack the young and weakly lambs." When we were on Skomer we were informed by Mr. Vaughan Davies that the eggs were taken from a Carrion Crow's nest on the island, and were replaced by the eggs of one of the farm-yard Pullets, and that in due time these substituted eggs were all hatched out by the Crow, and the Chickens then taken from the nest were all *black*. As there were no black Fowls upon the island at the time this was regarded as a prodigy, due to the agency of the Crows !

HOODED CROW, *Corvus cornix*.—A winter visitor. Has become rare in the county, and in the West of England generally, in the last thirty years. At the time Mr. Tracy published his notes, nearly fifty years ago, a few used to visit the coast in the autumn, but did not stay long. One was shot at Pembroke, in December, 1889, and sent to Jeffrys, at Haverfordwest, for preservation, and one frequented the cliffs at Tenby, in the winter of 1892 ; these are the only examples we have heard of in recent years.

ROOK, *Corvus frugilegus*.—Resident, and abundant. The county appears to suit the requirements of the Rook, as it is numerous in all districts, and is evidently increasing in numbers. In the severe winter of 1880 thousands perished. Their dead bodies were to be seen high up in the trees suspended frozen among the branches, and when the deep snow disappeared hundreds were discovered to have been buried beneath it, especially in the vicinity of small splashets, where the birds had sought in vain for food. The Rooks from Sealyham, where there is a vast rookery, used to pass over Stone Hall regularly twice every day, in the

morning shortly after sunrise, when they would be on their way to disperse in search of food over the mountain country beyond, and in the evening at sunset, on their return to their rookery. Whatever the weather they never seemed to deviate more than a foot or two from their aerial path, and we have often watched them in stormy winds doing their utmost to keep to it. The "mountains" evidently afforded them an abundant supply of varied food, and we ascribe to this their numbers throughout the county, in many parts of which there are very extensive and densely populated rookeries. Although the Rook is a great thief, stealing grain, potatoes, eggs, and murdering young rabbits and small birds whenever he gets the chance almost as persistently as the Carrion Crow himself, yet we have always considered that the evil he does is outbalanced by the good, in his devouring such countless hosts of injurious worms and grubs that, if they were not thus kept in check, would soon reduce the whole country to a state of desolation and sterility.

RAVEN, *Corvus corax*.—Resident. The Raven is still in sufficient numbers to justify our considering it as one of the characteristic birds of the county. We scarcely ever visited any part of the coast without beholding a Raven, or a pair of Ravens, and often have we seen them flying overhead far inland. The Rev. C. M. Phelps thought that there were about twelve nests of the Raven on the cliffs, following the coast round from south to north, and there is also a nest or two in each of the islands of Ramsey and Skomer, and on a few places inland, in some of the old castle walls, and they are said to have bred (and possibly may still do so) on the Treffgarne Rocks. Their nests are often placed on sites which are beyond the reach of any who might wish to rob them. We visited a nest in his parish of Castle Martin, in company with the Rev. Clennell Wilkinson, the Rector, that was placed on a shelf on the cliff beneath a great overhanging crag, the waves dashing against pointed rocks far below. This nest, which was an enormous stack of sticks thickly lined with sheep's wool, had evidently been added to by the pair of

birds year after year, and had probably been occupied by generation after generation of Ravens. While we were watching it, the Ravens, in their anger and excitement, kept on performing extraordinary evolutions in the air, at one instant shooting vertically upwards, the next instant, swooping down and disappearing behind a neighbouring cliff, they would again dart upwards, and sometimes suddenly swoop so close to our heads that we could feel the vibration of the air as they darted by. All the time they barked and croaked their wrath at our intrusion. It would have been perfectly easy to have shot them both, and we have heard with regret that a nest of Ravens, that had been long established on the coast, a little to the east of Tenby, was destroyed through the keepers shooting the old birds when they offered themselves as easy victims at the breeding season. Ravens nest very early in the year; Mr. Tracy saw eggs in a nest on 14th February in 1842, and took six from another nest on 4th April in that year. In Dr. Propert's splendid collection of eggs, there is a very fine and remarkable clutch of Ravens' eggs that were taken by Mr. Mortimer Propert, on Ramsey Island, in the spring of 1885: the eggs are large in size, and are pyriform in shape, like the eggs of the Guillemot. We have in our cabinet an exactly similar clutch of six eggs, taken a year or two since at romantic Tintagel, in Cornwall. The Rev. C. M. Phelps writes: "Just beyond Pendine (in the neighbourhood of Tenby) rises Gilman Point, a lofty headland of limestone. Gilman introduces us to an important personage, *Corvus corax*—the Raven. How persecuted this bird is! I verily believe he has been driven from other parts of South Wales to find a more secure home on the wild coast of Pembrokeshire. Here he nests in the most inaccessible cliffs. It is no easy matter to take a Raven's nest. The cliff is often 200 feet high and more. A nest taken last week was placed in such a cliff, and some 90 feet from the top. The summit of this cliff considerably overhung its base, so that the man dangled in mid-air during his descent. In another case, at St. David's, the nest was located in the roof of a cavern, and the collector, suspended over the

entrance, had to be pulled in, while yet swinging, by another rope. Precious are the eggs taken at such a risk! The Raven is probably our earliest breeder. All the nests I have seen were robbed somewhere between 28th February and the 12th March. How the bird manages to brave the piercing north-easterly gales, accompanied by sleet and hail, which dash with the utmost force against the nest on the exposed face of the cliffs in our neighbourhood (Tenby) I cannot imagine."

SKYLARK, *Alauda arvensis*.—A common resident; reinforced by migrants in the autumn. Fairly common and distributed throughout the county. Mr. Dix says: "More numerous in the mountains than in the more enclosed parts; certainly not so common as in England, but I think there can be no doubt that we have an increase of numbers in the autumn, at which time they come more into the valleys." We never saw in Pembrokeshire such large flocks of Skylarks as we have noted in England flying before approaching severe weather in the winter.

WOODLARK, *Alauda arborea*.—Resident, but scarce and local, Has been much persecuted by birdcatchers. The Rev. C. M. Phelps only once saw a Woodlark in the neighbourhood of Tenby. Mr. Tracy says it was common in his day around Pembroke. We had none nesting in our fields at Stone Hall, where we only saw it in small flocks in the winter months. We once saw a flock consisting of about thirty in a small furze brake. A few pairs were reported as nesting between Letterstone and Fishguard, but the whole time we were in the county we never once heard the song of this bird, and as we were constantly driving about during the summer we must have done so had any been in the district. We believe that it has become much more scarce since Mr. Tracy and Mr. Dix penned their notes upon the birds of the county. Writing in 1866, Mr. Dix could then say of the Woodlark that it was "very generally distributed, and a constant resident. It is an early breeder. I saw a young one that could fly in the beginning of May, and I have every reason

to believe there was a second brood, for in July four more young ones appeared, and they are now generally in the same locality with the old birds. They are now in small flocks of eight or ten apparently family parties. During the severe weather last February a flock of five came into the yard, feeding by the stable-doors and in the cattle yards; they were very tame, often allowing me to get within four or five yards of them. I have heard this bird singing every month throughout the year." The local birdcatchers used to obtain 36s. a dozen for fresh caught Woodlarks, hens and cocks taken together, so it is no wonder that they sought after them persistently, and have nearly obliterated this sweet songster from our county list.

SWIFT, *Cypselus apus*.—A summer visitor; local; numerous in places. To be seen about the old castles, such as Kilgerran and Pembroke, about the cathedral at St. David's, &c., &c. Also evidently nesting in places in the cliffs on the coasts, in crags inland, in old cottage and farm-house roofs and chimneys, &c., &c. We always had plenty of Swifts about us at Stone Hall, and imagined that many bred in some rocks by the banks of the Cleddy. They generally arrived with us on 4th May, and left us again in the first week of August, but we have seen one as late as 30th September.

NIGHTJAR, *Caprimulgus europæus*.—A summer visitor; common. The "mountain" country, especially where furze and bracken abound, is much affected by this singular looking bird, and in such places we have often flushed it in the day-time from its perch on an old furze stump, or from the ground where it has been sheltering beneath a furze bush. It is not uncommon in September in turnip fields, where we have met with it when after the partridges. On summer evenings we generally noticed one or two wheeling about our grounds. To quote our friend, the Rev. C. M. Phelps, "all over Pembrokeshire, wherever there is waste or fern-covered land—whether it be on the boulder-strewn mountain-side of the north, or on the heath-clad rocks near St. David's, and in the treeless wind-swept districts of Castle Martin

and St. Bride's, there you will be likely to hear of an evening the peculiar whirr of the Night-jar, and on the bare ground you may find its lovely marbled eggs. Near St. David's there lies an old encampment, probably Danish, called Penllan. Two years in succession a nest was taken here. The eggs lay on the bare dry, rough ground, surrounded by withered furze and green bracken; but, oh! such beauties they were, like two large grapes, only marbled and mottled with stone colour and cream, and purplish brown and grey. They are the finest Night-jars' eggs I have ever seen, and are now in Dr. Probert's collection." One day when we were driving in a lane a Night-jar rose from the side of the hedge, and flying in front for a few yards settled lengthwise on a rail, and so closely did the colour of its plumage match the wood that we had difficulty in distinguishing the bird as we passed within a few feet of it. When there are young birds, the Night-jars tumble about in front of anyone approaching the spot, feigning to be crippled, and attempt to decoy the stranger away, as we have often witnessed.

GREAT SPOTTED WOODPECKER, *Dendrocopus major*.—A rare occasional visitor. In a county so sparsely timbered as Pembrokeshire the tree frequenting birds would be naturally rare. We have never once seen the handsome Pied Woodpecker, but have been informed that it has been seen at Picton; also at Castle Martin; and Sir Hugh Owen has met with it at Landshipping, and knew of one killed many years ago at Williamston. One that had been killed close to the border of the county towards Carmarthenshire was brought to Jeffreys, the birdstuffer in Haverfordwest, about Easter, 1886. Mr. Jefferys, of Tenby, informs us that he has received a fair number of Great Spotted Woodpeckers from Carmarthenshire, in which county, with its finer timber, Woodpeckers would be naturally more numerous than they are in such a bare county as Pembrokeshire. Mr. Tracy mentions an example of the Great Spotted Woodpecker that was shot at Lawrenny. Both species of the Spotted Woodpecker are fond of fruit, and in our county there is not much in the way of fruit to attract them.

LESSER SPOTTED WOODPECKER, *Dendrocopus minor*.—A rare occasional visitor. Appears to be even scarcer in the county than the preceding species. Sir Hugh Owen has seen it at Goodwick. It is included by Mr. H. Mathias in his list, but neither this species nor the Great Spotted Woodpecker occurred to Mr. Dix. We have never seen it, although we were always on the look-out for it in our woods.

GREEN WOODPECKER, *Gecinus viridis*.—A common resident.

This is the only common Woodpecker in the county, and has been seen by us in all parts of it where there are trees. It is very common at Stone Hall, where we always had a nest close to the house, and where the cry of the bird was so incessantly heard throughout the spring and summer that we ceased to regard it as being in any degree a weather sign. Mr. Dix states that in his district it was common in the wooded dingles, and more so where there are old trees, particularly ash. With us the bird generally placed its nest in a decayed sycamore, and we were astonished one day at the heat communicated by the young birds to the wood when we put our hand on the tree just beneath the entrance hole to the nest. Many trees are worked upon by the birds before they finally select the site for the nest; they doubtless find some of them harder than they expected, and, after boring them to some depth, leave them for a softer and more decayed tree.

WRYNECK, *Iynx torquilla*.—A summer visitor; rare; it is very doubtful if it nests in the county. Only once seen by us at Stone Hall in April, when it was evidently only on passage. We have never heard the not-to-be-mistaken cry of the Wryneck anywhere in the county. We were informed by Mr. Moore, the head-keeper at Picton Castle, that he saw the birds there on the fine trees in the park during the summer months. If he is correct the birds probably nest there. Mr. Dix writes: "I heard this bird for the first time on 6th April; it was not numerous at any time during the summer." The Wryneck is included in Mr. Mathias' list, but Mr. Jefferys has no record of it from the neighbourhood of Tenby.

KINGFISHER, *Alcedo ispida*.—A common resident. We used to note many of these beautiful birds by the banks of the Cleddy, and generally had one in our grounds, where its favourite perch would be on the branch of a larch that projected over a fish-pond. Here it would sit for hours together on the watch for any perch or tench fry that might venture into the shallows, and was a beautiful object when its brilliant plumage was lit up by the sunshine. Mr. Dix considered the Kingfisher rare in his district, but had been informed that it was common in the south of the county. In very severe frosts we have occasionally come upon a frozen out Kingfisher, sitting disconsolately, with all its bright feathers ruffled, upon a twig by the side of a frozen pool; but, as we have never picked up a dead Kingfisher, we believe these birds do not succumb to the weather, but manage to pull through somehow or other.

BEE-EATER, *Merops apiaster*.—A very rare accidental visitor from the south. There is a specimen in the collection of Mr. H. Mathias, now with his other birds at the Tenby Museum. This was killed near the village of Johnston, about 1854. Mr. Tracy picked up a Bee-eater, he does not state in what year, on some high ground near the sea coast. It had not been long dead, and he succeeded in skinning and mounting it. It passed into the collection of the late Mr. John Stokes, of Cuffern, in whose hospitable house we have often seen it.

HOOPOE, *Upupa epops*.—An occasional visitor, both in the spring and autumn. Not very rare. There are many Pembrokeshire Hoopoes on record, and if the bird is not noted every year, only a short interval passes before one is seen. Mr. Tracy knew of seven examples. The one in Mr. Mathias' collection was shot in March, 1850, at St. David's. One was captured, after having been seen about for several days, inside a cottage, at St. Twynell's. This was on March 17, 1847. Another, about the same time, was taken on board the Waterford steamer, at the mouth of Milford Haven. The Hoopoe has also occurred near Pembroke. Sir Hugh Owen has told us of

one at Williamston. In more recent times we have notes of one shot at Solva, in the autumn of 1886, and of another at Broadmoor, Littlehaven, April 16, 1888.

CUCKOO, *Cuculus canorus*.—A common summer visitor. The Cuckoo appears to delight in the mountain parts of the county. We used to look out for its first appearance at Stone Hall, in the last week of April, and the 20th of that month is the earliest date on which we first welcomed its familiar cry. We heard a Cuckoo one year calling as late as at the end of the first week in July; it is unusual to hear the voice of the Cuckoo after mid-summer. By the banks of the Cleddy Cuckoos were specially numerous. While we have been fishing we have heard six or seven calling at once, and the birds were constantly flying backwards and forwards about the stream. Mr. Tracy observes that he never found a Cuckoo's egg, except in the nests of the Meadow Pipit and the Tree Pipit, but the birds avail themselves, doubtless, of a larger selection than this of small birds to take charge of their introduced young. Mr. Mortimer Propert met with its egg in the nests of the Meadow Pipit, Sky-lark, Hedge-sparrow, and Robin. The nest of the common Pied Wagtail is very often chosen.

THE AMERICAN YELLOW-BILLED CUCKOO, *Coccyzus americanus*.—A very rare waif from America. Only one in the county, and this is the specimen that is in the Gallery of British Birds at the South Kensington Natural History Museum, labelled "The Carolina Cuckoo," having been presented by Lord Cawdor, on whose estate at Stackpole it was obtained in 1832 or 1833. Mr. Tracy gives the following particulars of its capture in the *Zoologist* for 1850: "The specimen from which Mr. Yarrell figured his bird was killed by my brother near Stackpole Court. I first noticed it on the top of an ash tree in the act of feeding on some small insects on the wing very similar to the Golden-crests. Seeing it appeared a non-descript, it was shot immediately, and nothing more observed as to its habits." This species of Cuckoo rears its own young, a brood of six or eight in number.

BARN OWL, *Strix flammea*.—A resident far from common. In driving about the county we have very seldom seen any of these Owls beating the fields for mice in the dusk of a summer's eve. We had one or two inhabiting some old ivy-covered ash trees in the covers at Stone Hall, and occasionally saw one flushed when we were shooting through woods in the north of the county, but we believe in Pembrokeshire the majority of the Barn Owls find their abodes in nooks and crannies in cliffs, both inland and on the coast. We were informed that Barn Owls are numerous on Skomer Island, there inhabiting such places as we have described. The Rev. C. M. Phelps knew of a colony of Barn Owls in the Coygan, a huge mass of limestone rock, close to Laugharne Marsh. The old castles, such as Carew, Pembroke, &c., also afford, in their ivy-clad ruins, suitable nesting places. Although the Barn Owl is generally a solitary recluse, we have, in our experience, met with two instances of its living in society in such numbers that the association might fairly be termed an "Owlery." One of these had its location in some old cottages, just below a beautiful Henry VII. church tower. The roofs of the cottages all communicated, and were tenanted by such a number of Barn Owls that at last the cottagers rose up against them, being annoyed by the smell and the noises proceeding from the birds, and we were informed that between forty and fifty were either driven out or destroyed. The other instance of an "Owlery" occurred in the roof of a country house, where the venerable birds might have been undisturbed had they kept themselves from the young Pheasants, whose coops were at no distance from the house. But one season when *every one* of the young Pheasants had been carried off war was proclaimed, and the roof entered, and about a dozen adult Owls were found and killed, besides Owlets in various stages of growth. The floor was discovered to be littered over with the remains of the Pheasants. Tell it not in Gath! Mr. Dix writes that in his district the Barn Owl was "not common; I have only seen two specimens during the past year."

LONG-EARED OWL, *Asio otus*.—A winter visitor; scarce. We believe we have heard the cry of this Owl in the winter time in the fir plantations at Stone Hall. The bird-stuffers receive a few occasionally. The Long-eared Owl is included in all the lists we have examined, with the exception of that of Mr. Dix, who evidently never met with it.

SHORT-EARED OWL, *Asio brachyotus*.—A common winter visitor; also, perhaps, a resident in limited numbers. When Snipe-shooting in the autumn and winter, we never failed to flush some Short-eared Owls out of long grass and rushes. They would fly a little distance and then settle again, sometimes alighting on a stump of furze or on a small hillock, and keeping watch upon us until we walked on. The Rev. C. M. Phelps believes that a pair or two nest on Skomer Island, and has received the eggs taken from a nest found there upon the ground.

TAWNY OWL, *Strix aluco*.—A common resident. This is the common Owl of the county, and is abundant in all woods and plantations. We had numbers at Stone Hall, where it was no infrequent sight to see one or two roosting during the day on the roof of the house among the chimney pots. They nested in old Crows' nests; quarrelled with the Jackdaws for possession of unoccupied Pigeons' boxes, sometimes, by eating the young Jackdaws, giving a very strong hint of their desire to occupy them, and we have also known them to nest in chimneys. In the spring they would hoot throughout the day as well as at night, and on warm mornings in the summer we have seen them sitting out on bare branches sunning themselves. So numerous were they around us that a gentleman visiting at St. Lawrence Rectory, just beneath us, who went out into the Rectory garden one fine night and imitated their hoots, declared that he soon counted twenty-six or twenty-seven Owls replying to him from either side of the valley. Very often at night an Owl would perch on the ledge of our bedroom window and hoot to us, but such visits as these would sometimes disturb and alarm our guests. Although we had so many Tawny Owls in our planta-

tion, we never missed any of our young Pheasants, and are certain that the Owls never molested them, confining themselves almost exclusively to the rats and mice. One summer a regrettable incident occurred. Passing one morning through one of the covers we detected an old Crows' nest in an oak tree we had not before noticed, and in order to ascertain if it was occupied or not, we fired a shot at it, when immediately great was the commotion in the nest, and a Brown Owl fluttered to our feet with one of her wings slightly injured. We got our man to climb the tree, when he found that we had slain the five Owlets that were in the nest by our unlucky shot. After interring these victims at the foot of the tree, we carried the Owl carefully home, and placing her in an empty stable at once set some traps and supplied her with plenty of mice. As soon as night arrived she was speedily discovered by her disconsolate spouse, and so great was the hooting kept up by the two birds that no one who slept on that side of the house could get any rest. In the morning it was found that the injured Owl had contrived to escape by dragging herself through a wonderfully small hole at the bottom of the stable door, and we saw no more of her for a day or two, until we discovered that she had found a retreat in a corner of the shrubbery, where she was fed regularly all through the summer by the male bird, who not only showed his devotion in this way to his injured partner, but also took to himself a second wife, and successfully brought off a family of Owlets in an old Crows' nest in a Scotch fir, not far removed from the sanctuary of wife No. 1.

SCOP'S OWL, *Scops giu.*—Accidental visitor; very rare. Only one instance of its occurrence. A beautiful specimen was caught by a labouring man near Pembroke in the spring of 1868. He was trimming a hedge at the time when it fluttered out from the bottom. Mr. Dix saw it in Mr. Tracy's shop.

MARSH HARRIER, *Circus æruginosus*.—Formerly a common resident, but now only a rare accidental visitor. When we were shooting Snipe near Stone Hall, in the winter of 1880, a fine

old male Marsh Harrier flew within a few feet of us, and we might easily have shot it. Sir Hugh Owen has informed us of one shot some years ago on Jordanston Moor, not far from Fishguard, and of another that he saw hovering over the legions of wild fowl on the decoy at Orielton. There is one in the plumage of the first year in Lord Cawdor's collection that was shot near Stackpole Court. Writing about the birds to be found in the neighbourhood of Laugharne, the Rev. C. M. Phelps says: "People speak of a bird they call the 'Duck Hawk.' He is represented as a big fellow, and given to attack the various kinds of sea and freshwater Duck that come sailing up the Laugharne river with the flowing tide. One sunny morning, some four years ago, I, myself, saw some such Hawk of considerable size on a sandbank near the mouth of the Tawe. He flew across the estuary to the Warley Point before I could make him out. What can this 'Duck Hawk' be?" To this question of Mr. Phelps we are able to reply that the "Duck Hawk" is one of the old names of the Marsh Harrier, the bird being very fond of attacking and feeding upon wild fowl, and the bird frequenting the Laugharne river may, with all probability, be referred to this species.

HEN HARRIER, *Circus cyaneus*.—Resident, but becoming scarce.

Fifty years ago the Hen Harrier was, no doubt, as Mr. Tracy describes, "common, breeds on heaths and furzy moors, pretty generally distributed over the county." But this bird is, at the present day, but sparingly represented, and that only in the wilder parts of the county. The larger raptorial birds soon fell victims to improved sporting fire-arms, and to more general game preserving, and the Harriers in particular being quite defenceless at the breeding season, from their habit of laying their eggs upon the ground, were easily found and either trapped or shot. It is a wonder there are any remaining. When Snipe shooting over the remoter and wilder districts in the north of the county, we have frequently come across the Hen Harrier, and have had the opportunity of shooting many in all stages of

plumage had we cared to do so, but we had no desire to lend a hand in the extermination of this interesting and harmless bird. One day in the winter we saw three old males beating a part of Rhinderston Common in line, and we have known and regretted the capture of several old birds in the spring time on Cuffern Mountain. At Cuffern there is a case containing a pair of old Hen Harriers, with their young in down, from a nest found on the Cuffern estate.

MONTAGU'S HARRIER, *Circus cineraceus*.—A summer visitor; rare. The late Mr. Fortune found a nest of this Harrier close to his residence at Leweston, July 2, 1854, containing an egg and three young birds in down. He succeeded in obtaining the two old birds and mounted them with the young, and the case is now to be seen in the Museum at Tenby, and is a beautiful example of his skill in taxidermy. The egg was presented to the collection of the Rev. C. M. Phelps. This is the only instance of the occurrence of Montagu's Harrier in the county of which we can find a record, but it must doubtless have been both shot and trapped occasionally without recognition.

BUZZARD, *Buteo vulgaris*.—There are so many Boncaths in the county, either hamlets or inns, that we have in this fact a sure witness to the former abundance of the Common Buzzard in Pembrokeshire, "Boncath" being the Welsh name of the bird. At the present day we are only able to state that there are a few Buzzards left in the county, and that there may be possibly still some half dozen nesting stations of the bird on the islands, and on the cliffs along the coast. We have seen the Buzzard at Stone Hall, and have several times spared it when we have been Woodcock shooting in warm bottoms not far from the sea. The bird has flown foolishly up to us, or has crossed low over head, presenting an easy shot. We have seen a Buzzard's nest on a cliff on Ramsey Island, and possess an egg from it, one of a clutch taken by Mr. Mortimer Propert. All the Pembrokeshire Buzzards' eggs that we have seen are large in

size, the one we have is larger than any in a long series of continental eggs in our cabinet, but, as the Rev. C. M. Phelps remarks, "they are not as a rule richly marked." The Rev. C. M. Phelps agrees with us in estimating the present breeding stations of the Buzzard to be about six, and he adds that they are all on high cliffs. Mr. Dix writes: "In May, 1866, I had the unexpected pleasure of seeing a pair of Buzzards at Llan-granog, on the Cardiganshire coast, where I have no doubt they had a nest. I was first struck by their peculiar, plaintive note, greatly resembling the mewing of a kitten. Never having seen this bird on the wing before, and they being some 300 ft. above me, I was some time before I could be sure of the species. They were mobbed by several Crows and Jackdaws; as they wheeled and doubled about their rounded wings gave them a very unhawk-like appearance. I was glad to find they had selected so safe a nesting place, it being a shelving rock overgrown with ferns and grass."

ROUGH-LEGGED BUZZARD, *Archibuteo lagopus*.—A rare visitor in the autumn. This is one of the species that crosses over into the Eastern counties of England from the continent at irregular intervals, and very rarely penetrates to the south-west of the kingdom. When shot or trapped it might very well be confounded by people who were not well up in birds with the Common Buzzard, from which it is always to be easily separated by its feathered tarsi. Mr. Mathias has informed us that examples of the Rough-legged Buzzard have been obtained in the county, but is unable to supply dates and localities. The only one we ourselves knew of is one that was shot near St. Bride's, in October, 1889.

WHITE-TAILED EAGLE, *Haliaeetus albicilla*.—A rare occasional winter visitor. Although one of the highest points of the Precelly Mountains is known by the name of Foel-Eryr "the Eagle's Peak," we cannot ascertain that any species of Eagle has nested within recent years in Pembrokeshire, or has been

observed as a frequent visitor to the county. Sir Hugh Owen has informed us that in the winter of 1851 an Eagle was seen almost daily in the neighbourhood of Haverfordwest, more particularly frequenting the covers of Picton Castle and Slebech, and that it escaped being shot. This bird was supposed to have been a Golden Eagle, but with more probability may be considered to have been an immature White-tailed Eagle, a species not unseldom observed as a straggler along the western coasts of the kingdom. Then, another Eagle, of whose occurrence we do not possess the date, that was seen on Skomer, and was thought to have been a Spotted Eagle, and was not obtained, was more likely a young White-tailed Eagle on passage. In Lord Cawdor's collection, at Stackpole Court, we have seen a young White-tailed Eagle that had been shot near Carmarthen, and with this bird we exhaust our meagre record of the Eagles seen or obtained in the south-west corner of the Principality.

SPARROW - HAWK, *Accipiter nisus*. — A common resident ; numerous in the wilder unpreserved parts of the county. This dangerous and recklessly courageous bird was very plentiful at Stone Hall, where we suffered much from his attacks upon the game. Scores of times we used to see a male Sparrow-hawk fluttering against our windows endeavouring to reach our cage birds inside, or watching them from the porch ; and in the summer, when some of the cages would be brought out of doors, we repeatedly had to mourn over the death of some of our pets that had been killed by the marauder striking them through the wires. The Snipe that dropped into the marshy meadow below our house were regularly worked by Sparrow-hawks, and a stile in one of the covers was the favourite place to which they were carried and eaten, so that the ground beneath was littered with Snipe feathers. For some time we attributed this destruction to Merlins, until one day we came upon a male Sparrow-hawk with a freshly-killed Snipe in his feet, which we picked up as the bird flew off. Any bunch of Teal that appeared upon the river used to be persecuted by

Sparrow-hawks, until we have known them all to be killed one after the other. The Ring-doves in the plantations were also frequent victims, being knocked off their perches on the trees, then eaten on the ground below. The appearance of two or three Sparrow-hawks about the places where the young Pheasants were fed was also regarded as ominous of mischief, but they succeeded in carrying off very few, as there was plenty of cover for the Pheasants to hide themselves in from the destroyer. Needless to say that we waged war against the Sparrow-hawks, taking their nests and shooting all we could, but we never seemed to make any impression upon their numbers. The young Hawks, while they are still in the nest, keep up a wailing cry, which generally betrays its position, although it might otherwise have remained undetected in the thick upper branches of some old spruce.

KITE, *Milvus iclinus*.—Once a common resident, now only a rare occasional visitor. The Rev. C. M. Phelps states that when he was a boy he often heard of, and saw the Kite glide over the farm yards, and threaten the unhappy hens with the loss of their chickens. This was on the mountains, "some seven miles from Fishguard." But it is now long since there were any resident Pembrokeshire Kites. Indeed, sixty years ago, the Kite had become a scarce bird in South Wales. Mr. T. C. Heysham, the well-known naturalist, of Carlisle, was anxious to obtain a specimen from Monmouthshire, but had to wait for three years before his correspondent in that county was able to secure one. At last he had a male Kite forwarded to him in April, 1837, that had been caught in a trap, and was informed that the game-keepers had by that time rendered the Kite a very rare bird. For this interesting note we are indebted to the courtesy of the Rev. H. A. Macpherson, of Carlisle. We have ourselves heard from old people that they can remember the Kite as quite a common bird when they were young. We have been informed by Mr. Mathias that a Kite was killed about 1835, upon the Moat Estate, by a keeper of the late W. H. Scourfield Esq.,

and passed into the collection of Mr. Ackland, of Boulston. In February, 1854, Mr. Mathias himself saw a Kite on two occasions, and believes it to be the same bird that was shot shortly after in Carmarthenshire. There is a Kite in Lord Cawdor's collection at Stackpole. As recently as the summer of 1893 Mr. Howard Saunders had a fine view of a Kite at Dinas. This bird may have belonged to a little colony of Kites that still exists in Central Wales. Mr. C. Jefferys, of Tenby, informs us that he has seen a Kite passing over at Pendine, and that at the present time Kites still nest in Carmarthenshire, at a locality that had better not be disclosed, where there was a nest in the summer of 1893.

HONEY-BUZZARD, *Pernis apivorus*.—A rare occasional visitor, both in spring and autumn. This is a tree-frequenting species, particularly fond of the beech, not likely to be often met with in Pembrokeshire, where we have only one record of its occurrence. We have been informed by Sir Hugh Owen that he saw a Honey-Buzzard at Creselly, in the year 1851.

GREENLAND FALCON, *Hierofalco candicans*.—A rare accidental visitor from the far north. A fine specimen of this beautiful Falcon shot many years ago on Lord Cawdor's estate may still be seen in the Gallery of British Birds, at the South Kensington Natural History Museum. In the *Zoologist*, for 1850, Mr. James Tracy, of Pembroke, gives the following particulars of its capture: "The specimen from which Mr. Yarrell made the drawing in his excellent work on British Birds was killed on a warren on the estate of the Earl of Cawdor, was set up by me, and afterwards given by the Earl to the Zoological Society. It had been observed by my father, his lordship's keeper, for eight or ten days, and had, almost on each day, killed and partly devoured a cock Pheasant. It was very shy, always perched on the highest rocky eminences, and, therefore, difficult to get at; but was accidentally come on and shot in the act of rising from a cock Pheasant it had recently killed."

PEREGRINE FALCON, *Falco peregrinus*.—Resident. The cliffs along the Pembrokeshire coast were once famous for their Falcons. In his description of Milford Haven, old Drayton says, in his "Polyolbion"—

"By Nature, with proud cliffs environed about,
To crown the goodly road ; where builds the falcon stout,
Which use the gentil call ; whose fleet and active wings
It seems that Nature made when most she thought of Kings ;
Which manag'd to the lure her high and gallant flight,
The vacant, sportful man so greatly doth delight.
That with her nimble quills his soul doth seem to hover,
And by the very pitch that lusty bird doth cover,
That those proud eyries bred whereas the scorching sky
Doth singe the sandy wilds of spiceful Barbary ;
Or underneath our pole, where Norway's forest wide,
Their high cloud-touching heads in winter snow do hide,
Out-brave not this our kind in mettall, nor exceed
The falcon which sometimes the British cliffs so breed."

An old map of the county, published many years ago by T. Kitchen, and dedicated to Sir William Owen, Bart., has printed on its margins sundry information respecting the local antiquities and natural history. In those days the Peregrine Falcon was probably far more numerous than it is now, and the map quaintly states that "in the rocks about the promontory called St. David's Head, excellent Falcons have their aires and breed." About the year 1850 Mr. Tracy considered that from Caldy Island round to St. David's as many as twelve pairs of Peregrine Falcons might be counted during the months of May and June. There would be many more pairs on the rocky coast between St. David's and Dinas Head. Writing to us in the summer of 1893, Mr. Howard Saunders states : "There are a pair of Peregrines on Dinas Island on the N.W. side, and of Buzzards, which have had their nest on the N. side, I think. The Peregrines are certainly on the S.W. aspect." The Rev. C. M. Phelps was himself acquainted with some half dozen breeding stations of the Peregrine. He says : "One of the Falcon strongholds is on a grand range of cliffs in St. Bride's Bay, some 250 feet in perpendicular height. In August these cliffs are quite purple and golden with heather and gorse ; at their base

the lace-like waves of blue St. Bride's roll in one after the other, and there, soaring round and round with shrill cries and screams are the two Peregrines. At another breeding place, some miles farther on, I assisted at the taking of a nest in 1876. It was curiously placed under two large stones on a grassy platform half way down the cliff. There were four handsome eggs, rather under-sized and hard set." We have never been to any spot upon the coast without seeing a Peregrine, or a pair of Peregrines, and were often visited by them at Stone Hall, which is only six miles from the sea-coast. We almost trod upon a Peregrine one day in one of the covers, that rose at our feet off a freshly-killed rabbit. We consider it rare for a Peregrine to attack ground game. On another occasion a party of four Herons was noticed flying most uneasily down the valley of the Cleddy, uttering harsh cries of alarm, with a fine Falcon (*i.e.*, the female Peregrine) following in pursuit. The Falcon did not strike at the Herons, and seemed to be only amusing herself with the fear she had inspired. One fine summer's day we watched an attempt by a pair of Peregrines to secure a tame Pigeon at Druidston, on the coast of St. Bride's Bay. The birds made alternate sweeps at the Pigeon without success, and the quarry at last saved itself by taking to ground in some crevice in the cliff, when the disappointed Falcons flew out to sea, after one or two angry barks. Mr. Tracy gives the following interesting notes on the nests of the Peregrine, which he says are placed in the most inaccessible parts of the cliff. The birds lay four eggs, sometimes five, and, in one instance, he observed six young. "They make no nest, but lay their eggs in a cavity of the rock, where a little loose clayey earth has been deposited; sometimes in the old nest of the Raven, or Carrion Crow, but I never saw a nest without a little earth in it. They fix upon the situation early in March, and lay about the first week in April. Both male and female sit in turn on the eggs. I have known an instance where the male hatched and reared the young ones, when the female had been killed; and also, when the male had been shot, the female has continued

the work of incubation. When they have young ones they are not to be deterred from their nests, nor will they—even if fired upon—desert their offspring. On one occasion, I remember my father and myself firing at a pair of these birds, and the female returned to the nest almost immediately. We repeated this three times before we succeeded in getting her. In almost every instance where I observed a nest of this fine bird the following birds have had nests in the immediate vicinity, that is within 100 or 150 yards:—The Guillemot and Razorbill, in immense numbers, within a few feet, Puffins, the Kestrel, Raven, Carrion Crow, Jackdaw, Red-legged Crow, Great Black-backed Gull, one nest; Lesser Black-backed Gull, several nests; Herring-Gull, common; Kittiwakes, in thousands; Common and Green Cormorants, Swifts and Sand-Martins. And yet none of them showed any signs of alarm at the approach of so formidable a foe. I do not recollect a nest where the Herring-Gulls, Guillemots, Razorbills, and Puffins were not abundant. The old birds give you plenty of notice, by their harsh cry, when you are in the immediate vicinity of their nest, and it is not difficult to find the spot selected, the same old arched cavity being occupied every year. In one instance eleven pairs of Herons were breeding on the ledges of the rocks, within 150 yards of the nest of the Peregrine Falcon." Mr. Charles Jefferys, of Tenby, informs us that the Peregrine still nests yearly below Lydstep, and also in the neighbourhood of the Stacks.

HOBBY, *Falco subbuto*.—A summer visitor; rare; also seen in autumn when on passage. There are but few records of the Hobby, but it has probably sometimes occurred undetected. Sir Hugh Owen saw one at Goodwick in 1871, and writes to us: "Can't mistake a Hobby with his black-brown back, cream-coloured breast, and great length of wing, like a gigantic Swift." One shot at Dale, October 3rd, 1888, was brought to Jeffreys, the bird-stuffer, in Haverfordwest; another, at about the same date, was obtained at the Rhysgwyllt, Letterston.

The Hobby, being quite a bird of the woods, would not often be expected in such a bare and generally treeless county as Pembrokeshire.

MERLIN, *Falco aesalon*.—Resident; also a winter visitor. A few Merlins are resident, and the nest has been taken at various places in the county. We have heard of young birds having been taken from a nest near St. David's, and one of them was kept for some time there, at Bryn-y-garn. In the summer of 1886 Sir Hugh Owen saw a brood of young Merlins at Goodwick, in a patch of heather on the top of the cliff, at a spot where he has known the nest to have been placed for several years. We have also heard of a nest near Maenchlogog, on the Precelly Mountains. And the Rev. C. M. Phelps evidently met with a nest on the coast in the south of the county. He found a nest on the top of one of the high sand-hills, not far from Tenby, which contained four eggs, and surmised that they might be those of the Merlin. In the winter the Merlin is far from uncommon, and we have seen it at Stone Hall on numerous occasions. One day, when we were waiting quietly in a small larch plantation for a shot at a Woodcock, we suddenly detected a male Merlin sitting on a branch level with our head, and only a few feet from us. The bird remained motionless on its perch so long as we stood still, and only flew off when we moved on. Mr. Tracy reports that during a period of fifteen or eighteen years he received as many as eight or nine Merlins to set up for different gentlemen in the county. In his district Mr. Dix considered the Merlin not uncommon as an autumn and winter visitor, and that immature birds were the most numerous. Sir Hugh Owen once caught a Merlin near Goodwick in a rat trap. The bird was little injured, and the second day after its capture was tame enough to feed from his hand.

RED-FOOTED FALCON, *Tinnunculus vespertinus*.—A very rare accidental-straggler from the south. Writing to us from Cuffern, on May 5th, 1887, our friend, the late Mr. John Stokes, informed us: "Two days ago I saw at Ferny Glen two

small Hawks, one nearly black, and the other a brownish black ; very pointed wings, like a common Swift, and about eight to ten inches in length. I have never seen them before, and I put them down to be the Red-legged Falcon." Mr. John Stokes was an excellent ornithologist, and we have little doubt that he was correct in the name he gave to these rare visitors. Ferny Glen is only distant about a mile from the coast of St. Bride's Bay. Sir Hugh Owen has informed us that an example of the Red-footed Falcon was obtained at Tregwynt, a well-wooded spot on the northern coast of the county, and a noted Woodcock cover, at the time when it was the residence of Mr. Llewellyn, now many years ago, but could give us no particulars as to the season, sex, &c., of this rarity.

KESTREL, *Tinnunculus alaudarius*.—A common resident. The most numerous of all our Hawks, to be met with all over the county, nesting in woods, in old ruins, and in many places on the cliffs all round the coast. The Kestrel was common in our plantations at Stone Hall, and an old Crow's nest was generally occupied by it, and we have taken some very pretty varieties of its handsome eggs. One summer we witnessed a conflict that was maintained for several days between a pair of Crows and a pair of Kestrels for the possession of an old nest in a hedge-row elm : it ended in favour of the Kestrels, and a brood was successfully brought off. One bitter day we started a Kestrel off the snow-covered ground, and seeing it drop something as it flew off, went up to the spot and found a partly devoured Starling. We do not believe that Kestrels attack small birds unless they are unable to procure mice or insects, or are driven hard to find food for their young, when we have known them to carry off young Pheasants. One very foggy day, we shot a Kestrel by mistake, as it was fluttering low through the bushes, when we took it for a Woodcock. On picking it up, we found it had a diseased mandible, and was little more than a skeleton, having evidently been unable to feed. We have found a pair of Kestrels at every station of cliff birds we have visited, whether on the mainland or on the islands.

CORMORANT, *Phalacrocorax carbo*.—A common resident. There are nesting stations at various places on the coast, on Ramsey and Skomer Islands, &c. There are some twenty to thirty pair of Cormorants about Lydstep Head, near Tenby, as Mr. C. Jefferys informs us; a colony nests on trees at Slebech; and some Herons that nested at Poyntz Castle on St. Bride's Bay, were driven from their nests upon the cliffs by Cormorants, who took possession of them for themselves. The nesting places of the Cormorants emit an abominable stench from putrid fish remains, and are not delightful to linger near. In the summer-time, when the streams are low and clear, numerous Cormorants come inland, and work great havoc among the trout; and we always regarded it as an evil omen when we saw one or two of them heading up our valley. It is almost impossible to approach these poachers, as there is generally a sentinel perched on some tree by the river-side, while one or two others are working the adjoining pools. When fishing we would occasionally come upon a Cormorant so gorged with trout as to be unable to fly. One day we ran back for a gun to do execution on the caitiff, but just as we were approaching within range he uttered an unearthly cry, and vomiting his spoils, made off heavily on wing. Cormorants are often entangled and caught in fishing nets, and the birds of the year, with their white breasts, are considered by the fishermen to belong to another species, and have been sent to us as great rarities. A Cormorant, a short time since, was picked up dead, near Tenby, with an oyster clinging to and closing its mandibles. The bird was stuffed with the oyster, and is now at Bath.

We have received the following particulars of this strange occurrence from Mr. C. Jefferys, of Tenby:—

CORMORANT CAUGHT BY AN OYSTER.

“On August 22nd, 1892, the sea being somewhat rough for that time of year, the man in charge of the bathing-machines on the North Sands, Tenby, saw some 300 to 400 yards from shore, something dark which kept appearing and disappearing between

the waves. Being unable to make out what it really was, and at first thinking it might be one of the bathers in danger, he took a boat and went out. Before reaching the object he saw it was a large bird, that appeared to be using every effort to rise from the water, and yet was unable to do so, its head being held down by some unseen weight. With a little trouble he secured the bird, and brought it to shore alive. It proved to be an adult Cormorant, weighing between $7\frac{1}{2}$ and $7\frac{3}{4}$ lbs., and attached to its lower mandible was a large oyster; which was afterwards found to weigh between 9 and 10 oz. When the bird was brought me it was dead, but the oyster was still attached. It held to about an inch of the lower mandible, which in the bird's fearful struggles to get free had broken off short, the only attachment between it and the bird being the skin of the throat, which had twisted up like a piece of catgut. The Cormorant, when diving for food, must have seized the open oyster, which closed on the bill. The bird was buoyant enough to bring the oyster to the surface, but was unable to rise from the water, and must eventually have been drowned, as it could with difficulty keep its head above the surface. Mr. A. K. Cunninghame, of Bath, who was on the shore at the time, purchased the bird from the man who obtained it, and brought it to me to set up."

SHAG, *Phalacrocorax graculus*.—A common resident; perhaps, even more numerous than the Cormorant. There are small colonies on St. Margaret's Island, and on the Channel side of Caldy Island, near Tenby; on Skomer and Ramsey Islands, and at various places on the coast. Mr. Dix, who paid a visit to the Stack Rocks to see the enormous numbers of Guillemots that frequent them in the summer, states that on the west side of the Great Stack is a cave, in which Shags breed in safety, as it is perfectly inaccessible.

GANNET, *Sula bassana*.—Resident; only on Grasholm. The Pembrokeshire Gannets are supposed to be a colony from Lundy Island, whence the birds were driven by the continued persecution they sustained at the hands of the channel pilots,

and other robbers of their nests. Mr. Mortimer Propert, of St. David's, who has repeatedly visited Grasholm, reports them to be rapidly increasing in numbers. In the spring of 1886 Mr. Propert estimated that there were at least 250 nests on the island, in four separate colonies. So remote is Grasholm, some seventeen miles from the shore in the centre of St. Bride's Bay, and is both difficult to reach and not easy to get away from, that the Gannets might be expected to have at last found a place of security. However, a year or two since they were the victims of a raid, the particulars of which were made public, and excited at the time no little indignation. Since then, we believe, they have enjoyed peace. Accident, or stress of weather, occasionally drives the Gannet, inhabitant as it is of the wide ocean, far inland, and we have heard of a young one in the spotted plumage having been picked up by our friend and neighbour, the late Capt. O. T. Edwardes, of Tyrhos, on such an unlikely spot as Tyrhos Common. In November, 1887, Sir Hugh Owen reported to us that there were several immature Gannets in Goodwick Bay, that were fairly tame, and two of them seemed more pleased to be caught than to be turned adrift again. They were probably injured by the repeated gales.

HERON, *Ardea cinerea*.—A common resident. Although there are no large Heronries in the county, there are numerous small breeding stations, and the bird is generally distributed and fairly common. Our fishponds at Stone Hall were constantly visited by Herons that came from Sealyham, where there are a few nests in one of the covers. We have counted seven together of a summer's evening by one of our ponds, and we never went down to the Cleddy at any day in the year without seeing one or two, and after a long-continued drought in the summer, the birds would be especially numerous, as they then had better opportunities for capturing the eels, small trout, &c., that form their prey. Herons suffer severely after a long-continued spell of frost, when we have come across them perfectly starving. We captured one once, and brought him



GANNETS ON THEIR NESTS, GRASHOLM.

home, and put him in our carriage house, where he preferred to perch upon a high dog-cart. Here we fed him for about a fortnight, until we thought he had almost become strong enough to be restored to liberty, but one morning were vexed to find him lying dead upon the ground. We have often seen Herons perched upon the oak trees bordering one of our ponds. Here they would sit for some time before they descended to the shallow end of the pond in search of frogs and small fish or water-rats, and we believe they are expert catchers and devourers of these rodents. Some Herons nest upon the cliffs of the coast; we have already related how those at Poyntz Castle were dispossessed by Cormorants. The ejected Herons are stated to have migrated to Slebech, where they have formed a heronry. There is a heronry at Llanmilo, near Pendine, just over the borders of the county in Carmarthenshire, which, we are informed, consists of about thirty nests. Mr. Tracy mentions another at Linney Head, where the Herons nest in company with Cormorants and Guillemots. The nests, from six to twelve in number, are arranged side by side on the ledges of the rocks, and are quite inaccessible.

LITTLE BITTERN, *Ardetta minuta*.—A rare, occasional visitor; only two or three instances. One in the collection of Mr. H. Mathias, and given by him with his other birds to Tenby Museum, was captured beneath the wheel of the mill, near Merlin's Bridge, Haverfordwest. This was an adult. At the sale at Camrose House, in the summer of 1881, we noticed an immature Little Bittern in a case in one of the bedrooms. It was indifferently stuffed, and we could learn no particulars about it, but it had, probably, been obtained on the estate. There is also a specimen in Lord Cawdor's collection, at Stackpole, that is said to have been procured in the county.

NIGHT HERON, *Nycticorax griseus*.—An occasional visitor. Mr. Dix writes that an immature specimen, in the Stackpole Court collection, was shot near Pembroke mill-pond by Mr. Tracy,

about the year 1857. Within twenty yards of the same spot Mr. Tracy shot another, which he forwarded to Mr. Dix. This was on December 7th, 1868. It proved to be a male, and had a single occipital plume about three inches long, white, tipped with dark brown; the back and wings were beautifully shot with olive green; the white spots on the back and wing coverts, Mr. Dix adds, were more distinct and larger than they are represented in Yarrell's figure. Mr. H. Mathias has informed us that a Night Heron was shot in the Lord's meadow, at Lamphey, when he was a boy. Two others were killed near Kingsbridge, Pembroke; one of these Mr. Mathias saw in the shop of Mr. Tracy, at Pembroke, immediately after it was shot. These two specimens are, without doubt, those mentioned by Mr. Dix. In 1876, three Night Herons roosted for several days in a tree in a garden belonging to Canon Lewis, at St. David's, within thirty yards of the Cathedral. One was shot, on May 12th, and proved a fine adult male, with three white occipital plumes. This handsome specimen is now in the possession of Dr. Propert, of St. David's. The Night Heron, like many of the family, is a nocturnal feeder, hiding itself, and roosting during the day in thick bushes and trees.

BITTERN, *Botaurus stellaris*.—A rare, occasional winter visitor.

The Bittern is now a very rare bird in Pembrokeshire, and there are but few instances of its occurrence of late years. It was more common fifty years ago, in Mr. Tracy's time. He used to receive a few every winter, and, about the year 1842, he states that he had no less than thirteen Bitterns to set up, all killed the same week, the weather being very severe at the time. Bitterns have been obtained occasionally at Tregwynt, in the north of the county. Sir Hugh Owen has shot them at Goodwick. One was killed at Dale, February 2nd, 1888. Two were brought to Jeffreys, the bird-stuffer in Haverfordwest, in the severe winter of 1890. One of these was from Tregwynt. A *white Bittern* is said to have been seen near Solva, in the winter of 1886. It escaped slaughter, and was probably a Spoonbill. In

former days, the Bittern was a resident wherever there were mires and reed and rush-grown bogs for it to skulk in, and was, doubtless, a common Pembrokeshire bird.

AMERICAN BITTERN, *Botaurus lentiginosus*. — A very rare, accidental straggler from America—only one specimen—that obtained at St. David's, in October, 1872 (*vide Zoologist* for 1883, p. 341). This bird was seen and identified by Mr. Cecil Smith, the author of "The Birds of Somerset." Mr. Smith states that he saw it in the possession of Mr. Greenway, who had shot it. Mr. Greenway had recorded it at the time in *Land and Water*, with some doubt as to its being the American Bittern. It is singular that only two stragglers from America, this species and the Yellow-billed Cuckoo, have occurred on the coasts of Pembrokeshire, while upwards of a dozen have been noticed on the no very distant coasts of Devon and Cornwall. We can only surmise that others may have visited us without having been noticed or recorded.

SPOONBILL, *Platalea leucorodia*.—An occasional visitor in the winter; not very rare, sometimes arriving in considerable flocks. The direction from which the Pembrokeshire Spoonbills reach us is somewhat of a puzzle. The bird is a common species in Holland, and, therefore, as might naturally be expected, a regular visitor to the eastern counties of England. But birds crossing the German Ocean do not penetrate so far to the west as the Principality, save in a very few exceptional instances. We must, therefore, look to some other quarter for our Spoonbills, and are inclined to believe that they come to us from the south of Spain *viâ* the Bay of Biscay. Flocks of Spoonbills have been observed in the winter-time on the north coast of Cornwall, and this would seem to favour the route we have suggested. We learn from Mr. H. Mathias that, in the years 1854 and 1855, as many as eleven Spoonbills were shot on the shores of Milford Haven. The specimen in Mr. Mathias' collection at the Tenby

Museum was killed near Mallock Bridge in 1854. In 1885, five or seven were shot in one day near the same bridge. Mr. Mathias saw all these birds in Tracy's shop, in Pembroke, soon after they were set up. Several of them were young birds, and one of them was so small and so ill-fledged that it seemed wonderful how it could have reached the Pembrokeshire coast. Sir Hugh Owen has told us that a flock of seven Spoonbills was seen on Goodwick Sands in 1856. Mr. Dix saw an immature Spoonbill in Tracy's shop in 1867, and was informed that two or three are seen about Pembroke almost every year. One was killed near St. David's, on October 31st, 1890, as we learn from Mr. Mortimer Propert, who saw the bird when he was out with the hounds on a stubble field, in company with some farm-yard Geese a few days before it was shot. It was finally killed on a farm called Arglof, midway between St. David's and Solva, and was, as we heard from Jeffreys, the bird-stuffer, a very fine, white bird, but without a crest. In most of the instances we have given above, of the visits of the Spoonbill to Pembrokeshire the dates were not supplied to us, but we believe that, as in the south-western counties of England, they were all during the winter, in this differing from the appearances of the bird in the eastern counties, where it is in general seen in the spring.

GLOSSY IBIS, *Plegadis falcinellus*.—An occasional visitor; very rare; only one instance. Mr. Tracy mentions a Glossy Ibis, a fine adult, that was shot at Slebech, in the autumn of 1834, and was in the possession of the gamekeeper. Mr. Thomas Hall, birdstuffer, of London Wall, in the *Zoologist* for 1858, mentions another that was killed so near to the borders of the county as Laugharne Marsh. This was on April 19 in that year.

EGYPTIAN GOOSE, *Chenalopex ægyptiacus*.—Introduced. This species is included in Mr. Mathias' list. We know of no recent instances of its having occurred at large, nor do we know of any ornamental waters within the county where it is kept. Any

that have been obtained must have wandered away from lakes where fowl are preserved, perhaps at a considerable distance, as these Geese are notorious stragglers.

BEAN GOOSE, *Anser segetum*.—An occasional winter visitor. All the wild Geese, with the exception of the Brent Goose, are rare in Pembrokeshire at the present day. During our eight years residence in the county the Bean Goose alone occurred to ourselves. In the severe winter of 1880 a flock of seven or eight frequented the neighbourhood of Stone Hall, and once or twice were seen by us flying low over our grounds.

[PINK-FOOTED GOOSE, *Anser brachyrhynchus*.—This species is included by Mr. Mathias, but as it appears to be unknown in the south-western parts of the kingdom, we are doubtful if it was correctly identified. It is a very common winter visitor to the eastern counties of England.]

WHITE-FRONTED GOOSE, *Anser albifrons*. — An occasional winter visitor in severe weather. Has been seen by Sir Hugh Owen at Goodwick. One received by Jeffreys, the Haverfordwest bird-stuffer, from Fishguard, in December, 1890.

BRENT GOOSE, *Bernicla brenta*.—A winter visitor, sometimes abundant. We are informed by Sir Hugh Owen, that Brent Geese usually appear on the sands at Goodwick, at the first northerly or north-easterly gale between September 29th and October 7th; and again later in the winter. They are also seen at Broadmoor, near St. Bride's Bay, where two were shot on October 15th, 1888; also on the Milford Haven creeks, &c.

BARNACLE GOOSE, *Bernicla leucopsis*.—A winter visitor, not so numerous as the preceding species. Has been shot by Sir Hugh Owen, on Goodwick sands, where it generally arrives about the first of October, and is often met with in company with the

flocks of Brent Geese. It has also occurred at Orielson, near Milford Haven, as we are informed by Col. Saurin. A freshly shot specimen was washed ashore near St. David's, at the beginning of December, 1893, as we learn from Mr. Mortimer Propert.

MUTE SWAN, *Cygnus olor*.—Introduced. The chief station in the county of these beautiful birds is at Stackpole Court, where a number frequent the romantic lake in the park in what may be considered a wild state. The lake winds about in a serpentine shape, its banks, at places, bordered by finely timbered woods, and at one part, on the side towards the sea, by a warren. At its extremity towards the sea a narrow range of sandhills separates it from the shore. The Swans come and go as they like, and are most numerous during the summer, when there are nearly a hundred on the lake, many pairs being engaged in nesting. In the autumn, when the weeds die down beyond their reach, and the water is high, most of the Swans disappear, and in the middle of winter, not more than eight or ten will be found remaining. A few of the birds visit the Milford Haven creeks, and one is occasionally shot on the neighbouring marshes, but the majority evidently leave the county altogether, and probably migrate far to the south. The few Mute Swans that occasionally appear on the estuary of Taw and Torridge, in North Devon, may be stragglers from the Stackpole flock. The Swans all return again to their Pembrokeshire home in the spring. Lord Cawdor informed us that he never introduced any fresh blood, and that the number of Swans varied with the abundance of the American weed, that, after twenty-five years, had begun to diminish, and had almost died out in some parts of the water.

WHOOPEE, *Cygnus musicus*.—A rare, occasional winter visitor; not many on record. One, in the collection of the late Mr. John Stokes, at Cuffern, was shot many years ago at Pantyphillip, some three miles inland to the south of Fishguard. One at Stackpole frequented the lake there for some time, until it was shot by Lord Cawdor, with his rifle, from the bridge crossing the lake.

Singularly enough, that same day, a party shooting through the covers in the park, brought in a specimen of Bewick's Swan that had been shot out of a flock of six or seven passing overhead. Among the "various" captured in the decoy at Orielson, a Swan is included, but the species is not given.

BEWICK'S SWAN, *Cygnus bewicki*.—An occasional winter visitor.

This small species of Swan is a not uncommon visitor to the S.W. parts of the kingdom, and cannot be considered rare in Pembrokeshire, where, during our own limited acquaintance with the county, we knew of several instances of its occurrence, and secured a fine example for our collection. On Nov. 10th, 1887, a fine adult was shot on Trevithan Pool, near St. David's, by Mr. Harding Harries. The bird was seen on the water in company with a flock of tame geese, and when Mr. Harries approached, instead of taking wing, it swam among the geese and endeavoured to conceal itself in their midst, sinking its body as much as it could, and bending down its graceful neck. Mr. Harries waded into the water, and, with a single shot, laid the beautiful stranger dead upon its back. Five other Bewick Swans, all immature birds, were shot by a farmer, near St. David's, in the winter of 1887; all these are said to have been plucked and roasted. Another young Bewick's Swan, in dirty white plumage, was shot near St. David's, in December, 1890, and sent to Jeffreys, in Haverfordwest, to be stuffed. Many Swans, probably all belonging to this species, were observed in various parts of the county that severe winter, and flocks, numbering fifty birds, were seen flying over. Mr. Jefferys, of Tenby, informs us that he received a specimen of Bewick's Swan from the neighbourhood of St. David's, evidently a favourite locality for the birds, as it is the nearest point to the opposite coast of Ireland, where these swans are seen by the thousand during the winter, and that he sold it to a Mr. Mason, of Burton-on-Trent. A flock of Wild Swans, numbering about fifteen, is reported as having been seen at St. David's at the beginning of November, 1892. These were probably Bewick's Swans.

COMMON SHELDRAKE, *Tadorna cornuta*. — Resident. This handsome duck has been seen by Sir Hugh Owen, on the sands at Goodwick. Mr. Dix states that a pair or two nest on sandhills below Milford Haven. Numbers nest on sandhills near Laugharne, just beyond the eastern borders of the county, in Carmarthenshire. A Sheldrake was captured, with other fowl, on Orielton decoy, one winter.

RUDDY SHELDRAKE, *Tadorna casarca*. — Accidental visitor. During the summer of 1892, a large number of Ruddy Sheldrakes visited this country, an immigration almost as extraordinary in its way as the incursions of Pallas' Sandgrouse, and flocks appeared at many places on all the coasts of England, Ireland, Wales, and Scotland, and many examples were shot. One was obtained out of a small flock near St. David's during the month of July that year. These birds had probably come from North Africa. This beautiful species, which also bears the name of the Brahminy Duck, and is abundant in India, is commonly kept on ornamental ponds, and the few occurrences which had been previously noted in this kingdom have been usually regarded as escapes.

WIGEON, *Mareca penelope*. — A common winter visitor. The Wigeon occurs in flocks in the autumn and winter all round the coast, and a few visit inland rivers and ponds. We have seen Wigeon in the Cleddy below Stone Hall, and have occasionally flushed and shot single birds from small pools and ditches when Snipe shooting. The Wigeon is by far the most numerous of all the ducks that visit us in the autumn. On the decoy at Orielton in eight seasons (1877-1885), 4,150 Wigeon were taken as against 1,197 Wild Duck and 2,975 Teal in the same period. We append a list of fowl supplied us by Col. Saurin, of Orielton, taken in the decoy from 1877-1885. We believe this list is published by Sir R. Payne Gallwey, Bart., in his book on "Decoys." The Orielton decoy was partially constructed in 1868, and added to in 1871, 1873, and 1876. No record of fowl taken was kept before 1877.

ORIELTON DECOY (COL. SAURIN).
(Near Milford Haven.)

Season.	First Birds taken.	Last Birds taken.	Duck.	Wigeon	Teal.	Pintail.	Shov- eller.	Various	Total.
1877-78	Nov. 28	Feb. 15	5	504	341	0	0	3	853
1878-79	Aug. 22	Feb. 11	183	452	871	6	4	15	1531
1879-80	Sept. 17	Feb. 14	244	604	485	6	6	23	1368
1880-81	Sept. 30	Feb. 26	100	275	317	2	1	16	711
1881-82	Sept. 28	Feb. 23	70	535	190	1	1	5	802
1882-83	Sept. 16	Feb. 10	85	643	264	1	1	3	997
1883-84	Aug. 25	Feb. 23	150	562	363	3	1	1	1080
1884-85	Nov. 1	Feb. 22	360	575	144	9	2	1	1091

¹⁸⁷⁷⁻⁷⁸ Besides these 1 Sheldrake, 1 Barnacle Goose, 1 Pochard, and 2 Gadwall have been taken. The "various" include Swans, Pheasants, Snipe, Water-hens, Coots and Divers.

PINTAIL, *Dafila acuta*.—A winter visitor; scarce. Sir Hugh Owen has seen and killed many Pintails on Goodwick Moor. But only 28 were taken on Orielson Decoy in eight seasons, and this fact would indicate that this species is rare. We have never met with it ourselves. It is a most excellent bird for the table.

WILD DUCK, *Anas boscas*.—Resident; common; breeds all over the county in suitable places, on wet moors, by the side of streams and ponds. We had several broods every season

below Stone Hall, on the Cleddy, and by the side of tiny streams joining that river. The Wild Duck must have been far more abundant fifty years ago. In a meadow below Stone Hall the remains of an ambush at a bend of the stream still exist. Concealed within it an old farmer, who lived close at hand, used to shoot the Ducks as the flocks flew up and down the stream just at daybreak, or at dusk, and is reported to have often picked up twenty or more before his breakfast. In snowy weather, accompanied by rough northerly winds, we have ourselves seen great numbers of Duck on the Cleddy, and have had good sport with them. The rougher the wind the greater used to be our success, as the wind both prevented the birds from hearing our approach, and impeded their flight. We found a brood one summer close to the house, and the old Duck permitting herself to be caught, we carried them all to one of our ponds, but they did not stay there, quickly wandering off again to the river.

GADWALL, *Chaulelasmus streperus*.—An occasional winter visitor; rare. The Gadwall is included in Mr. Mathias' list, and is said to have been shot near Pembroke. We have seen a pair stuffed in a case at Orielton, that were taken in the Decoy with other fowl. One in the gallery of British birds at South Kensington Natural History Museum was presented by Lord Cawdor, and came in all likelihood from the lake at Stackpole.

GARGANEY, *Querquedula circia*.—An occasional summer visitor; rare. Included in Mr. Mathias' list. Specimens in the Stackpole Court collection. Three were shot on a pond on a farm called Bramble, near Pen-y-cwm, in the north of the county, February 28, 1888.

TEAL, *Querquedula crecca*.—A common winter visitor; perhaps, also a resident in limited numbers. Although we have no evidence that it does so, we consider it extremely likely that a few pairs of Teal may nest annually in suitable places in the

county. Every winter little flocks of Teal made their appearance on the Cleddy beneath Stone Hall, where it was comparatively easy to get shots at them by following the river in its windings, as the birds generally dropped into corners of the stream where willows and rushes afforded shelter. Very frequently, too, we used to come across single Teal when after Snipe, flushing them from drains, warm ditches, and small rush-bordered pools, thus adding variety to our bag. A buff-coloured Teal in the National Collection at South Kensington was presented by Lord Cawdor, and came from Stackpole.

SHOVELLER, *Spatula clypeata*.—A winter visitor, not very common. Occasionally the Shoveller deserts the sea wrack on the coast, and comes inland to feed on the fresh water ponds, and one day when Woodcock-shooting at Trecwn, we disturbed three Mallard Shovellers from the small lake at the head of the cover. In their full adult plumage the Mallard Shovellers are among the handsomest of our British Wild Ducks. We have always found this species most excellent for the table.

RED-CRESTED POCHARD, *Fuligula rufina*.—A very rare accidental winter visitor from the south of Europe. Only one occurrence; Mr. Tracy informed Mr. Dix, that he shot a female Red-crested Pochard at Stackpole, and that Lord Cawdor took it up to London to be identified. The date is not given. This is the bird included in Dr. Gray's Catalogue of the British birds in the British Museum, and is still in the National Collection at South Kensington. In his "Handbook of the Rarer British Birds" (pp. 159, 160), Mr. Harting mentions *two* Pembrokeshire Red-crested Ducks, but we have no doubt that both his entries refer to the same bird, the one killed at Stackpole, which Lord Cawdor presented to the British Museum.

TUFTED DUCK, *Fuligula cristata*.—A winter visitor; common. This small species, one of the most active in diving of all the diving Ducks, is occasionally met with on inland ponds. We

have seen it in little parties on the lake at Stackpole in the early spring, and one winter one was shot on one of the ponds at Stone Hall. It may occasionally remain to nest. Great numbers are to be seen during the winter diving in the shallows in Goodwick Bay.

SCAUP, *Fuligula marila*.—A winter visitor; common. This is more of a maritime species, and is very rarely met with at any distance from the coast. In general it keeps some little distance out at sea, where it may be met with throughout the winter in large flocks. Sir Hugh Owen sees it commonly off Goodwick. It is hardly worth powder and shot for the table, as the flesh is strong and rank.

POCHARD, *Fuligula ferina*.—A winter visitor; not uncommon. Has occurred to ourselves on small ponds, some distance from the coast. Some are taken on the decoy, at Orielson. Mr. Dix mentions one that was shot on a pond in his neighbourhood. This species is also an accomplished diver.

GOLDEN-EYE, *Clangula glaucion*.—A winter visitor; not very common. Mr. Dix states that a few are seen most winters, but that adult Mallards are rare. In the severe winter of 1880 we saw several in immature plumage, on the Cleddy, below Stone Hall. Two adult Mallards in the National Collection at South Kensington are labelled "Pembrokeshire," and were presented by Lord Cawdor. The Golden-eye is often met with on the bays along the coast, in company with Scaups, Pochards, and Tufted Ducks, a few Common Scoters sometimes mingled with them, all diving together in the shallows over some favourite feeding-grounds.

LONG-TAILED DUCK, *Harelda glacialis*.—An occasional winter visitor; rare. There are two immature birds of this species in Lord Cawdor's collection that had been shot at Stackpole. Mr. Tracy informed Mr. Dix that one was shot at Haverfordwest, on

June 15th, 1843, a remarkable date for this northern bird to have been found so far to the south. From his description, this specimen appears to have been in almost complete summer plumage. It had one white scapular feather, and a few white feathers on the crown of the head, and on the back of the neck; the white feathers remaining on the head and neck were about a quarter of an inch longer than the others.

EIDER DUCK, *Somateria mollissima*.—An occasional winter visitor; rare. We saw some adults of this beautiful bird in the Stackpole collection, that had been obtained at Stackpole, or on the coast between Stackpole and Tenby. Mr. Dix mentions an immature male that had been shot near Pembroke, as also being in Lord Cawdor's collection, and an adult male, which he believes had been killed in Carmarthenshire. A young male Eider was shot at Dale, January 18th, 1891.

SCOTER, *Ædemia nigra*.—A winter visitor; not rare. Mr. Dix states that immature birds are not uncommon on the coast. Numbers are seen occasionally in Goodwick Bay. Sir Hugh Owen shot one off the pier head at Goodwick.

VELVET SCOTER, *Ædemia fusca*.—A rare winter visitor. Mr. Mathias has told us of one that was brought into Tracy's shop at Pembroke many years ago. Six were seen in Goodwick Bay on November 16, 1886, as we were informed by Sir Hugh Owen. Mr. Charles Jefferys informs us that one was picked up exhausted on the shore at Tenby, in December, 1889, and brought to him alive. This species can readily be distinguished, with glasses, at some considerable distance on the water, owing to the white speculum on the wings.

GOOSANDER, *Mergus merganser*.—A regular winter visitor; not uncommon. One shot by Mr. W. Summers on the lake at Heathfield in the early spring of 1884, was sent to us, and although infested by a large parasite was in good condition; it was a female. Heathfield is several miles from the coast.

Another was obtained at Tregwynt, on the north coast, in January, 1888. We ourselves watched one swimming and diving in the lake at Stackpole, March 22, 1888. Mr. H. W. Evans, of Solva, possesses a pair of Goosanders in his collection, male and female, that were shot in Solva harbour. Mr. Dix says the Goosander occurs more frequently than the Red-breasted Merganser. The Mallard Goosander, in full plumage, is the most beautiful of all the divers that visit our estuaries and bays in the winter time.

RED-BREASTED MERGANSER, *Mergus serrator*.—A winter visitor; rare. In Mr. Mathias' list. Mr. Dix says "occasionally obtained." We know of no recent occurrences.

SMEW, *Mergus albellus*.—A winter visitor; not uncommon. In Mr. Mathias' list. Has been shot by Sir Hugh Owen, at Goodwick. Mr. Dix says: "A beautiful adult male in the Earl of Cawdor's collection, was shot on the lake at Stackpole Court. Immature birds are not infrequently seen. In its pretty black and white pie plumage, and with its handsome crest, the Mallard Smew is another conspicuous species, that we have distinguished at a great distance on the water. It is one of the tree-building species like the Golden-eye and some other ducks, and its pure white eggs are still considered as rarities by oologists. It nests in Lapland and the north of Europe.

RING-DOVE, *Columba palumbus*.—Resident. To be met with in all the wooded parts of the county, but it cannot be considered abundant anywhere, and we never saw such flocks in the winter time as are commonly observed in England. We had many Ring-doves in our plantations at Stone Hall, where they were constantly harried and devoured by the too numerous Sparrow-hawks. Occasionally the birds would do us damage in the kitchen garden, but as we always liked to see them about our trees we never permitted them to be interfered with. In the early months of the year they used to feed greedily in our

grounds on the roots of the Pilewort Crowfoot (*Ranunculus ficaria*), for which they were to be seen searching about in small flocks. Mr. Dix considered that Ring-doves were more numerous in his north-eastern corner of the county than they were in the south, and remarks that few persons have any idea of the damage they do to turnips and rape during the winter months.

STOCK-DOVE, *Columba palumbus*.—Resident ; chiefly to be found upon the coast. We were informed by Mr. Moore, the head-keeper at Picton Castle, that a few pairs of Stock-doves nested in some hollow trees in the park, and we believe we saw some of the birds one day when we were crossing the park in his company. We learn from Mr. C. Jefferys, of Tenby, that Stock-doves frequent and nest in the ivy-coloured cliffs near that delightful watering-place. We believe that many of the Pigeons that frequent the cliffs in the St. David's district, and are generally considered to be Rock-doves, are either Stock-doves or escaped farmyard Pigeons. We never detected a Stock-dove among our Ring-doves at Stone Hall.

ROCK-DOVE, *Columba livia*.—Resident. Mr. Tracy, writing fifty years ago, stated that a few pairs then nested in the cliffs on the coast. But we must state that we have never seen a Pembrokeshire specimen of this species, and some eggs sent to us from St. David's were evidently too large for those of the Rock-dove. However, from what Mr. Mortimer Probert tells us, we believe that there may be a pair or two of genuine Rock-doves nesting in the caves on Ramsey Island. We have ourselves, on various visits to that most romantic and charming island, seen many Pigeons flying along the cliffs, but were never able to get sufficiently near them to be certain what they were. Mr. E. W. H. Blagg, of Cheadle, Staffordshire, who was staying at Tenby in the summer of 1887, assures us that he saw Rock-doves in the neighbourhood of the Stack Rocks, and also at the "Huntsman's Leap," a name given to a deep fissure in the cliffs, where there is a sheer descent of a hundred feet or more to the beach below.

"At the latter spot," he writes, "I can call to mind seeing a few Doves come out of the deep fissures in the steep cliffs, far away *below* us, so that we had a good view of their *white rumps*, and this was my first introduction to Rock-doves; since then, in 1892, I have seen crowds of wild Rock-doves in the Shetlands." He adds further "Stock-doves I have known well all my life. Of course there are lots of them near Tenby, and I have come across plenty of them on the coast of Carnarvonshire; *they* seem to prefer ivy-covered cliffs, not very high as a rule, but I think the Rock-Doves like cliffs that are too wild and steep for ivy to grow on them, with caves and deep fissures to shelter in."

TURTLE DOVE, *Turtur communis*.—A summer visitor; scarce. A few pairs nest in the south of the county. In driving about the northern districts we have occasionally noted a single Turtle Dove in May and June. We saw one at Solva, towards the end of May, 1887, and another near St. David's, and one was shot at Stone Hall as late in the year as October 23rd, 1887. We know of no instance of the nest having been found in the north of the county, neither did Mr. Dix, who considered the Turtle Dove only a straggler to Pembrokeshire. He states that it has been known to breed in the woods at Orielson, near Pembroke, but he believed only on one occasion. He writes: "On 20th June, 1867, I was surprised to see one fly across a small field here, which was being sown with turnips; the same morning, within a less distance than a mile, I heard two others in different plantations; three pairs were regularly heard and seen here for about ten days; I was careful they should not be disturbed, as I hoped they would remain through the summer; however, they all left, and we have had none since: their note is so peculiar it is not easy to suppose they would remain unnoticed, more particularly as they were several times mentioned to me during the time they remained."

PALLAS'S SAND - GROUSE, *Syrrhaptes paradoxus*. — This singular bird, whose first appearance in the British Isles was

noted early in July, 1859, at Tremadoc, at the north end of Cardigan Bay, was observed in Pembrokeshire at each of its great visitations in 1863 and 1888. A female bird was shot near Haverfordwest, February 8th, 1864; and is recorded in Professor Newton's excellent account of the first immigration of the species to this country in the volume of the *Ibis* for 1854, page 211. The Haverfordwest specimen was the last reported occurrence of this bird in Great Britain on its first visitation. Sir Hugh Owen has informed us that a Sand-Grouse was shot in Pembrokeshire, in the spring of 1870; this occurrence is singular, as no other Sand-Grouse is recorded from the British Isles in the year 1870. In the second, and still more numerous irruption of Pallas's Sand-Grouse, in 1888, a female was shot in the parish of Ambleston, on 28th May in that year; and about that date, we heard from Mr. Mortimer Propert that some "strange birds" had been seen near St. David's, that were probably a flock of Sand-Grouse. The home of this species is to be found on the steppes of Tartary, and the cause which induced it to wander so far away, and in such numbers, is quite unknown.

PHEASANT, *Phasianus colchicus* and *torquatus*.—Introduced.

The Pheasant thrives remarkably well in Pembrokeshire, not only in the preserves, but in the wild unpreserved districts in the county, where it meets with all its requisites—water, shelter and food. It delights in the stiff fox-covers of from four feet to five feet high furze, which are so numerous, and in these, as we have often experienced, neither dogs nor beaters will avail to flush it. The birds shot in these impenetrable covers are worth some trouble to obtain, being fine and heavy, and of most excellent flavour. The ring-necked Pheasant (*P. torquatus*) is now the predominant variety throughout the county. It is said to have been introduced by Sir John Owen, Bt., of Orielton, some fifty or sixty years ago, and it has extended itself even to the remote "mountain" districts. The Rev. W. Scott, rector of Slebech, has told us that when he was a boy at school in Carmarthen, he well remembers the town crier one day being sent

about the streets to request the people to abstain from injuring the Pheasants that had just been turned down upon an estate at no great distance from the town. This, doubtless, had reference to the ring-necked birds, and was, probably, their first introduction in that part of Carmarthenshire. We have only very rarely encountered specimens of the old breed of red birds in the covers in North Pembrokeshire. In very severe winters, after deep snows and long protracted frosts, we have once or twice picked up dead and frozen hen birds in our covers, but we never came across a dead cock bird in such weather, and believe that these hardy birds can find a subsistence for themselves almost anywhere, and are practically omnivorous. When Snipe shooting, we have often put up and shot straying cock Pheasants in unexpected places, on the barest hill tops, and in the wettest bogs. No doubt, a considerable number of Pheasants fall victims to the foxes that swarm beyond all reason in some parts in the north of the county ; several times we have had our setter draw up to and stand a fox kennelled in some trash on the "mountain," with one of our Pheasants half-eaten by his side, and we have wondered whether it was the "varmint" that we allowed to trot off towards our covers, or the remains of game that had been winded by our dog.

RED-LEGGED PARTRIDGE, *Caccabis rufa*.—Introduced. Lord Cawdor in the south of the county, and Mr. J. Worthington, of Glyn-y-mel, Fishguard, in the north, have attempted to naturalise the red-legged Partridge, but have met with no success. We have seen the fine, healthy young birds reared at Glyn-y-mel, but they soon disappeared after they were turned out in fields where it seemed likely they would remain, nor were any ever met with afterwards during the shooting season in the neighbourhood. Mr. Moore, the head keeper at Picton Castle, has told us that he once shot a single example of this species at Picton, and this is the only one that, to our knowledge, has been obtained anywhere at large within the county. Attempts to introduce the red-legged Partridge have also failed both in Devonshire and Dorsetshire, and it seems

natural to conclude that the climate of the south-west of the kingdom is too humid for it. We cannot think of any other reason to account for its refusing to establish itself in the various (in all other respects) suitable districts on which it has been turned out.

PARTRIDGE, *Perdix cinerea*.—Although not to be numbered as ranking among the Partridge counties, owing to the comparative scarcity of cornfields and its generally "mountain" character, Pembrokeshire, nevertheless, seems to be well adapted to this well-known and favourite bird, and in the southern districts, notably on Lord Cawdor's estates in the parishes of Castle Martin, &c., it is fairly plentiful, and very good bags are made. In good seasons, such as the Jubilee year, for instance, it is also sometimes abundant in the wilder parts of the county, and we have had excellent sport. In hard winters, when snow lies long upon the ground, great numbers of Partridges perish. Many are starved and frozen, and many more fall victims to vermin that can then more easily discover them, and we have found their remains lying about the fields. A wet June, when there are frequent thunderstorms, is also disastrous, as then the young broods perish almost to a bird, and the sportsman will find the fields bare of coveys when September comes. We have had our own stock reduced to almost a vanishing point, but a couple of good seasons will work like magic; the birds seem to spring up again from nowhere, and plenty of employment is again provided for setters and breech-loaders. Owing to the quantity of furze and other rough cover, the Pembrokeshire partridges, in the north of the county especially, suffer little at the hands of poachers, as it is almost impossible to take them with nets.

QUAIL, *Coturnix communis*.—An irregular summer visitor. One or two are noted every season, and in certain years it is numerous. Mr. Tracy writes: "I receive a specimen or two almost every autumn, or during the winter." The only occur-

rences which came under our own notice were all of single birds obtained in the winter months. Captain O. T. Edwardes, of Tyrhos, shot one in December, on Tyrhos Common, close to Stone Hall. Mr. Dix writes: "An adult female was shot at Boncath, near here, on September 7th, 1867, and was sent to me a day or two afterwards; it was flushed from amongst some rushes in a wet springy meadow, where in winter we usually find snipes. This singularly agrees with the observations in the 'Birds of Norfolk.' Eight or nine years ago five were seen near here, of which three were shot; and about twelve years ago three were seen near Eglwysrwrw, and all were shot; they were all found in and near similar cover to the bird I have. I think I never saw a bird so loaded with fat as that sent me; although rolled up in four or five thicknesses of newspaper, the grease went through all, and the feathers were so saturated that I almost despaired of cleaning them." Mr. Dix was an intimate friend of Mr. H. Stevenson, the author of the "Birds of Norfolk," and on referring to that admirable work, we find (vol. i., p. 431) that Mr. Stevenson attributes the scarcity of the Quail in the county of Norfolk, at the present day, to the fact that the rough, swampy places that were the birds favourite grounds, have all been enclosed and ploughed up. In the *Zoologist* for 1870, Mr. Dix records the abundance of Quail in Cardiganshire and North Pembrokeshire that year. There were many nests, and he himself heard of 330 having been killed by eighteen sportsmen, who supplied him with their lists, and thinks that the total number bagged may have been from four to five times that number. Nearly the whole were shot in September. Early in October several sportsmen looked after Quails, but could find none. The first Quail was noticed in the middle of July, near a field in which two nests were subsequently found. "This was a barley field, and when it was cut, about August 14th, two nests were found; one contained eggs. Near the other nine young ones, just hatched, were seen; these remained near the same spot for some time. Another nest with eggs was found within a day or two of the above date, and not more than

two hundred yards distant." We cannot but think the date here given is rather a late one for the birds to be found nesting, and would point to the flight having reached Pembrokeshire late in the summer. The birds would certainly begin to nest immediately on their arrival. Mr. Dix states that although there were so many Quail in the north of the county, only one or two were seen in the south; 1870 was a great year for Quails all over the kingdom, especially in the west and south-west. In 1893, Quail were again numerous in most parts of England, and were met with commonly in North Pembrokeshire, and many were killed in the St. David's district. The report from the Small's Lighthouse mentions Quail appearing there on the morning of September 3rd, 1885, indicating the departure of the birds towards the south. We cannot gather whether this refers to a single bird, or to a passing flock.

RED GROUSE, *Lagopus scoticus*.—Resident? We fear that it is extremely doubtful if a single Red Grouse is left on the Precelly Mountains. Formerly a few broods were to be found there, and Col. John Owen, of Rosebush, used to get a few brace on the hills. In the autumn of 1885, a lady of our acquaintance received a present of a brace that had been shot there, and these are the last that we have ourselves heard of. Mr. Mortimer Probert tells us that he saw what he believed to be Grouse on Brennin Fawr, near Crymmych, on September 9th, 1892. This is on the Cardiganshire side of the Precelly range.

BLACK GROUSE, *Tetrao tetrix*.—We cannot say how long ago the Black Grouse ceased to exist as an indigenous bird in the county. Mr. Dix states that he had heard of a few in the neighbourhood of Fishguard, but he certainly referred to those the late Mr. Barham turned down at Trecwn in his attempt to naturalize the birds upon his beautiful estate. However, the birds never nested, and soon wandered away, and were all shot down. We have never met with a sportsman who had ever

shot a Black Grouse in the county, and only a few and limited localities in it are suited to the bird. The Black Grouse has disappeared, apparently, from several districts in South Wales, where it was once common. Its former abundance is supposed to be attested by the number of inns scattered about, bearing the sign of the "Black Cock." This may either witness to the presence of the bird, or only to its heraldic representative, as the Black Cock is the old crest of the Mathew family, at one time owners of large estates in various parts of South Wales, just as numerous inns standing on what was once their property, still bear the sign of the "Black Lion," from the three rampant black lions that are on their shield. In the summer of 1878, Mr. Edward Laws, of Tenby, and Professor Rolleston, of Oxford, discovered bones of the Black Grouse in the Longbury Bank Cave, near Tenby.

WATER-RAIL, *Rallus aquaticus*.—Resident. We had numerous Water-Rails at Stone Hall, and often saw them feeding on the lawn in company with Moor-hens. In the dusk, when they were running on the garden paths, we sometimes took them for rats. We used to see plenty of them by the Cleddy when fishing, and in the winter sometimes flushed them from little ditches bordered by brambles and furze, when we were after the Snipe. We do not think they were more numerous in winter than at any other season, although some people might imagine them to be so because they are then more often seen, as much of the cover they can skulk in has then died down. Unless the spots frequented by the Rails are actually visited with a good dog accustomed to hunt them, they might be altogether undetected and considered rare, although in point of fact quite numerous, and that close at hand. In many parts of the country, where to our knowledge it is a common resident, the Water-Rail, for the above reason, is regarded as quite a rare bird, and we have once or twice had one sent to us to be named. A Water-Rail was seen on the Smalls Rock, by the Lighthouse, October 15th, 1880; others on November 6th, 1883 ("Migration Reports").

SPOTTED CRAKE.—An occasional visitor in the autumn; rare.

To our surprise we never ourselves encountered this bird at large in Pembrokeshire, and every season we were shooting over ground exactly similar to that in which we had been accustomed to meet with the bird in other parts of the kingdom. It is evidently a rarity in the county. Sir Hugh Owen has shot it occasionally on Goodwick Moor; and we know of one that was shot in the neighbourhood of Fishguard, in October, 1888. Mr. C. Jefferys has informed us that he shot a Spotted Crake near Tenby. There is a specimen in the Stackpole Court collection, and the bird is included in Mr. Mathias' list. The Spotted Crake would seem to be equally scarce in the neighbouring county of Cardiganshire, where Mr. J. H. Salter informs us that he has not yet come across a single specimen.

BAILLON'S CRAKE, *Porzana bailloni*.—Accidental; only two on record. Sir Hugh Owen has informed us that he saw two of the "Lesser Spotted Crake" on Goodwick Moor, in the autumn of 1869, and shot one of them. The bird "looked like a field-mouse when swimming." He has since recognised his specimen in Yarrell as Baillon's Crake.

CORN CRAKE, *Crex pratensis*.—Summer visitor. The Corn-Crake is numerous in most parts of the county, where it arrives about the middle of April. We often saw it on our lawn at Stone Hall, and always had one or two nests close at hand. In the shooting season we noted it until the end of October, the latest birds being always found on wet places on high ground. We owned a setter that was very clever in catching and bringing us Corn-Crakes, and we would take the birds from him and let them go. One season he caught us a Corn-Crake several days in succession at the same corner in a field, which, we thought, indicated that the birds do not stray far from their place of birth until they migrate.

MOOR-HEN, *Gallinula chloropus*.—Common resident. Numerous everywhere in the county by the side of streams, ponds, &c. At Stone Hall we had numbers, semi-domesticated, that fed on the lawns, and nested by the fishponds. By one of our ponds we counted seven nests one summer. As soon as the young birds can take care of themselves, the old birds evidently drive them away, as no increase was observable in the number usually frequenting the grounds, as must have been the case had all the broods remained. Occasionally we noted a nest in a tree overhanging the water five or six feet from the surface, but the usual site would be among the grasses and rushes at the edge of the ponds. Rhododendron bushes were often selected, and for several years in succession there was a nest in the boat house. When snow has been on the ground we always found that the banks of the Cleddy had numerous tracks of foxes, and supposed the “varmints” were after the Moor-Hens and rats. The Moor-Hen appears to have been scarce in the part of the county with which Mr. Dix was acquainted, and he expresses his surprise at their rareness, as the country was so well suited to them. A single Moor-Hen was noticed at the lantern of the South Bishop’s Lighthouse at 1 a.m., on October 9th, 1884, indicating that it was then migrating. We should have thought the Moor-Hen an unlikely species to be affected by the migrating impulse.

COOT, *Fulica atra*.—Resident; but confined to the few large ponds in the county, such as those at Orielson, Heathfield Stackpole, &c., where there are rushes, &c., for their nests. Mr. Dix considers the Coot “a regular winter visitor, but not numerous.” Sir Hugh Owen has shot Coots at Goodwick.

[**GREAT BUSTARD**, *Otis tarda*.—We have no record of this fine bird in Pembrokeshire, but venture to include it, as one has been obtained in recent years so near to it as at Llanelly in Carmarthenshire. This occurrence is related in the *Zoologist* for

1891, p. 104. During Christmas week, 1890, a female Great Bustard was shot near Llanelly, and was sent to a bird-stuffer at Carmarthen. Pembrokeshire is at a great distance from the old haunts of the Great Bustard, and at the time the bird still existed as an indigenous species it very seldom wandered, and we do not believe that our county was ever likely to have been visited by it.]

STONE CURLEW, *Edicnemus scolopax*.—A winter visitor; very rare; only one occurrence known to us. The Stone Curlew is a common summer visitor to the eastern counties, to Salisbury Plain, &c., but is only known in the south-west as an occasional straggler in the winter months. One was shot by Mr. Browne Edwardes near St. David's in January, 1891, and recorded at the time in a local paper.

[**COLLARED PRATINCOLE**, *Glareola pratincola*.—A very rare accidental visitor from the south. It is the lucky fate of the Pratincole when it wanders northwards to the British Isles to be more often seen only than to be secured. This rare bird is included in Mr. Mathias' list on the strength of one that was seen several times by Mr. Bowen at Llanstinan many years ago. Mr. Bowen pursued the bird for some time, and had one unsuccessful shot at it. Mr. Mathias went to Llanstinan on purpose to search for it, but was not fortunate enough to see it.]

GOLDEN PLOVER, *Charadrius pluvialis*.—A winter visitor; perhaps, also, a resident. Mr. Dix says, "common on the mountains in winter, they were seen here last year by the second week in October." Although we have ourselves failed to detect the Golden Plover among the birds nesting on the Precelly Mountains, we think it extremely likely that a few pairs may breed there, and we are the more inclined to this opinion as we have only been able to search a limited portion of the mountains on

the western side. The Golden Plover nests on the Breconshire Mountains, and commonly on the moors in North Wales, and the Precelly Mountains offer very suitable ground for their summer quarters. Mr. J. H. Salter, of University College, Aberystwyth, informs us that Golden Plovers breed sparsely on the Cardiganshire hills. We used to see large flocks every autumn and winter around Stone Hall, and often shot them when we were after Snipe, getting them within range by imitating their whistling call. In the very cold spring of 1886, when a black frost with snow lasted for a stretch of six or seven weeks, the lower parts of the county were visited by tens of thousands of Golden Plovers. The birds might be seen on the muddy shores of Milford Haven, and in all the meadows adjoining the coast, searching in vain for food. We actually saw some in the town of Haverfordwest. We saw others on the hard turnpike road that ran in front of our dog-cart like chickens. A few visited our kitchen garden at Stone Hall. Starving as they were, they did not perish in such numbers as the poor Peewits, that during this cruel frost we found lying about dead and frozen in the fields by scores.

GREY PLOVER, *Squatarola helvetica*.—A winter visitor; not common; in Mr. Tracy's experience, "only in severe weather are they seen on our shores, and are then very easily obtained, as they are by no means shy." We have found the Grey Plover to have a very different disposition in other parts of the kingdom where we have shot it, but never without a very careful stalk, as we always found it to be one of the very wildest birds, even more suspicious and difficult to approach than the Curlew itself. Sir Hugh Owen has seen the Grey Plover at Goodwick, but is not able to include it in the list of birds that have fallen to his gun, a sufficient proof of its extreme wariness.

RINGED PLOVER, *Ægialitis hiaticula*.—A common resident on the coast; large flocks arrive in the autumn. This pretty bird nests commonly at many places on the coast. Mr. Tracy gives

the following interesting particulars of a nest: "A pair of these birds nested on a rabbit warren on a high exposed piece of ground (we think we know this spot at Stackpole). I took the eggs from the nest, and in a week the female had laid her four eggs again within a few yards of the former ones. These I again took, and in thirteen days four more eggs were laid very near the last nest, but these were decidedly much smaller than the former ones. On visiting the place about three weeks afterwards I again found a nest containing four eggs, but these were a great deal smaller, and had almost lost their character, as they were nearly round, and not pointed at the end, like the true type of Plover's eggs. One, which I suspect to have been the last laid, was not larger than a Robin's egg, and quite round, clearly showing the female bird had completely exhausted herself in her efforts to increase and multiply. I have no doubt of their being the same pair, as there were no others seen near the place."

DOTTEREL, *Eudromias morinellus*.—A passing migrant in the spring and autumn. This species is very rarely seen in Pembrokeshire. We are indebted to the Rev. Clennell Wilkinson, rector of Castle Martin, for the information that one was shot in his parish in the spring of 1888. It is not in Mr. Mathias' list, or in the one we have received from Sir Hugh Owen.

LAPWING, *Vanellus vulgaris*.—Resident. The well-known Lapwing is one of our commonest birds, nesting in most districts of the county, and to be seen commonly in large flocks in the autumn and winter. In the bitter spring of 1886 numbers perished, and were to be found lying dead by the frozen drains in most of the meadows. We had many about our garden, and placed food for them on the paths, barley-meal, &c., but they would not touch it. We used to watch them from our windows running on the lawn, and stopping with a jerk every few paces to listen (like a thrush) for the movement of any worm beneath the frozen ground.

TURNSTONE, *Streptilas interpres*.—An autumn visitor to the coast ; rather rare. Sir Hugh Owen has shot the Turnstone on the sands at Goodwick. We have heard of others at Angle and Tenby, all immature birds in their first plumage. We have no record of one obtained in the spring in the beautiful nesting dress. Mr. Tracy considered this species scarce, and stated that only an occasional one was to be met with in the autumn, and mostly the young of the year. In August, 1892, several Turnstones were shot near Tenby, where Mr. C. Jefferys informs us that they are rare.

OYSTER-CATCHER, *Hæmatopus ostralegus*.—Resident. The Oyster-catcher occurs in small numbers at various places on the coast, and nests on the Bishop's Rock, also on Skomer, where we found pairs of old birds and their newly-hatched young on the last day of May, 1886. In their handsome plumage of vividly-contrasted black and white the old birds, as they flew anxiously low overhead against the blue sky, were beautiful objects. Mr. Tracy states that, on several occasions, he took the eggs of the Oyster-catcher on a small island at the entrance of Milford Haven, and Sir Hugh Owen has shot the bird on the sands at Goodwick. The plaintive whistle of the Oyster-catcher, or Sea Pie (to give it its commoner name), is one of the characteristic bird-notes of the pebbly beaches around our coasts. We have not often met with the bird on a sandy shore.

AVOCET, *Recurvirostra avocetta*.—A rare accidental visitor. The singular and graceful Avocet, once a regular summer visitor in considerable numbers to the fen-lands of the eastern counties of England, is now only a chance visitor to our shores, and is very rarely observed in the south-western parts of the kingdom. When it now appears it is generally in the winter time. Mr. Tracy states that he received two to stuff that had been killed in the neighbourhood of Pembroke in the winter, but does not give the dates. One of them is, doubtless, the beautiful speci-

men in the Stackpole collection Mr. Dix speaks of as having been killed near Pembroke. Mr. C. Jefferys has informed us that an Avocet was shot near Tenby about the year 1883. We know of no other occurrences. Two Avocets in Col. Montagu's collection, labelled "South Wales," may have come from Pembrokeshire, a county with which the Colonel appears to have been well acquainted.

GREY PHALAROPE, *Phalaropus fulicarius*.—An autumn visitor.

Our memory goes back to the time when the Grey Phalarope was regarded as a very rare bird, each occurrence being carefully chronicled. But for many years hardly an autumn has passed without this pretty species being detected on our coasts, and after severe gales great numbers are periodically intercepted on their migration southwards from the shores of Greenland, and driven into the English and Bristol Channels. Numbers are also seen along the Welsh shores fronting St. George's Channel, and after an autumn gale we have heard of Phalaropes being plentiful at Aberystwyth. The birds are wonderfully tame, and quite fearless of man, and many suffer in consequence, being easily killed by stones cast at them. Alas ! that the pretty little tempest-tossed wanderers should receive so cruel a reception. Some are carried by the wind far inland, and occur at all manner of unlooked-for places. We have a note of one that was shot on a pond in Letterston village, six or seven miles from the coast. Sir Hugh Owen has seen Grey Phalaropes at Goodwick. One was shot at Castle Martin in November, 1886. One, obtained at Stackpole, is in the collection there. Grey Phalaropes have often occurred on Caldy Island, and at Tenby, and were numerous there in the autumn of 1891 ; others in the autumn of 1893. The Haverfordwest birdstuffer frequently receives them from the neighbourhood of Pembroke, St. David's, &c., and had many sent to him in the autumn of 1891. We have no instance of one having been obtained in the spring in the red nesting plumage. In fine weather the Grey Phalaropes pass our coasts at a considerable distance out at sea,

perhaps, even far out in the Atlantic to the west of Ireland. They only approach the shores when driven in by rough weather.

WOODCOCK, *Scolopax rusticola*.—An autumn visitor, doubtless also a resident in limited numbers. Although we have no instance of a Woodcock's nest having been found in the county, it must certainly breed occasionally, if not regularly, in some of the large covers. We had always formed to ourselves large expectations of the sport to be had in Pembrokeshire in Woodcock shooting, and it was chiefly on this account that we were led to fix for a time our residence in the county. But we were greatly disappointed. The days of large bags seem to have passed away; and, although old sportsmen had great things to tell of doings at some of the famous covers in by-gone years, in our own experience Pembrokeshire seemed to rank far behind Devonshire as a Woodcock county. Through the kindness of our old friend Colonel John Owen, of Rosebush, who for many years rented the Trecwn shooting, we had many days with him in those beautiful covers where rhododendrons and alders combine to make attractive lodgings for the Cocks, and on several occasions found them plentiful; one day we must have had over a hundred flushes. In beating the Trecwn covers we generally began by trying the wooded hill-sides in order to drive the Cocks down into the large alder-beds in the valley, where we would finish in the afternoon. Here the Cocks would be sometimes plentiful, and almost every step forward flushes would ensue. Watching the ground carefully between the alder stools we would occasionally detect a Cock, or a couple of Cocks, squatting upon the ground; others moved elsewhere would fly towards us, and settle at our feet. As the birds were flushed again they often disappointed us of a shot by darting off through the bushes, only a foot or two above the ground, when we dared not fire for fear of hitting a beater, or one of the other guns, for in such a cover it was next to impossible to keep in line. We were careful not to shoot unless the Cocks topped the alders,

or crossed us above them. Woodcock shooting with a party in large alder covers is dangerous work, and a rash shot might speedily afford employment for the doctors. We have enjoyed good sport in the covers of Sealyham, Cuffern, Tregwynt, in the woods near the Tufton Arms, &c., &c., and in our own small covers at Stone Hall there would frequently be a good show of Cocks, when a passing flight would drop in, and we have flushed as many as 50 of a morning. We often had Cocks in the kitchen garden, and among the rhododendrons and laurels on the lawn. The covers at Slebech are noted for Woodcocks, and in former years 60 would be bagged there in a day's shoot. In mild and wet weather the Cocks resort to the high furze on hill-sides, and in such places we have found them in considerable numbers. In snows, and in hard black frosts, they leave the covers for the coast. In the severe winter of 1880 great numbers were shot at St. David's. A friend tells us that he then found one of the hotels there full of Woodcocks, and sportsmen would go out and return in a couple of hours with their pockets full. All the little furzy combs running down towards the sea were thronged with them, and there was one little spot close to the stream which runs at the back of the old Cathedral where directly a Cock was shot another came and took its place, and this went on throughout the day. In the beautiful covers at Tregwynt which face the sea over 40 Cocks have been killed in a day during a deep snow. We have flushed numbers of Cocks some seasons up to the end of March, when we have been fishing the Cleddy, and working our way through covers bordering the stream, and as the Woodcock nests early in the year we felt convinced that some of these late birds must remain in the county to breed. We have seen a very pretty variety that was shot in the south of the county, that had its back and shoulders thickly mottled with small patches of white. Sir Hugh Owen has told us that he has shot "small dark Cocks of only 7 ozs." Many sportsmen look upon these extra small birds as a distinct species, asserting that when they are flushed they dart off at once, like a Snipe ; but Cocks vary much in size

and weight, and we believe these very small-sized birds to be merely the young birds of the year, and the offspring, probably, of small birds. We invariably found the labourers, and farm people in general, when we were out shooting, eager to give us information respecting any "*cyffyllog*," or Woodcock, they had seen; it was evidently in their opinion, *the* sportsman's bird, and in comparison they attached but small importance to the "*petrusen*," the Partridges, or to the "*faysants*;" next to the Woodcock a *hare*, doubtless because of its extreme rarity, the "*ysgyfarnog*," was considered worthy of being reported. As is well known, Woodcocks gladly avail themselves of any holly bushes in the covers, because of the dry and warm shelter afforded by their thick leaves. If, as a holly bush is approached, the ground beneath it is carefully scrutinised, the bird may sometimes be seen squatting, and we have frequently succeeded in espying one. We remember being present at a shoot at which, at the end of the day, four Cocks were found to be included in the bag, all four having been potted on the ground beneath the shelter of holly-bushes.

GREAT SNIPE, *Gallinago major*.—A winter visitor, rare. The Great Snipe never occurred to us in Pembrokeshire; it is at all times very rare in the south-west of the kingdom. Mr. Mathias includes it in his list. Mr. Tracy says: "The Great Snipe has, in several instances, been killed in this county;" but he does not furnish localities and dates. We know of no recent occurrence.

COMMON SNIPE, *Gallinago caelestis*. — Resident; numerous arrivals from the north in the autumn and winter. The Common Snipe, like the Woodcock, is far less plentiful in the county than it used to be. We have heard old sportsmen speak of the great bags it was possible to make fifty or sixty years ago, not to be accomplished anywhere now. Our old friend, the late Mr. John Stokes, of Cuffern, once got between sixty and seventy couple in a day and a half on the moors in the neighbourhood of the

Tufton Arms belonging to the Trecwn estate, besides Woodcocks and other game. There are still a few remote and almost inaccessible spots adjoining the mountains where a good shot might secure from twenty to thirty couple a day, but on all easily reached grounds that in old days were alive with Snipe the bird is now but sparingly represented. However, sportsmen who are able to range over the wilder parts of the county still meet with a few Snipe to give an agreeable variety to the bag, and we used to get sixty couple or so in the course of the season around Stone Hall. The Snipe still nests all over the county in suitable places, and on a summer evening's walk its peculiar drumming is one of the country sounds certain to meet the ear. There were every season a few nests at no great distance from our residence, and the young birds generally "came down" (the local term for hatching off) successfully. Varieties of the Snipe are not very common. Captain John Tucker Edwardes, of Sealyham, firing into a wisp that rose one frosty morning by the side of one of the small ponds at Stone Hall, shot a pure white Snipe, and curiously enough did not observe it when it was flushed among the other Snipe. We examined this specimen at Sealyham, and could not detect any darker feathers upon it, and it was evidently a perfect albino. Sir Hugh Owen shot a White Snipe at Llanstinan, in 1853, and another very light coloured one in 1855, that he presented to Mr. John Stokes, of Cuffern, by whom it was beautifully mounted. This bird we found to be nearly completely white, one or two of the scapular feathers only being a pale buff. One that fell to our own gun, was a very pretty mealy variety, being powdered over the head and shoulders with small specks of white. We have, once or twice shot Snipe in the so-called *Scolopax russata* plumage, but these we looked upon as large male birds in a transitional stage of moult. We have seen Snipe in this red plumage in the middle of April. The outline of the tail in the full, or Common Snipe depends entirely on the growth of the tail feathers; if the outer feathers are not fully grown one has the bird with pointed tail; or, if the outer feathers have attained

their full length while the central ones have not done so, then there is the wedge-tailed Snipe that we have often shot at the beginning of the autumn, specimens of which have once or twice been forwarded to us, and supposed to be a distinct variety. We have never seen one of the dark plumaged Snipe, that used to be known as "Sabine's Snipe," in Pembrokeshire, but among the myriads of Snipe that were formerly obtained we doubt not it has occurred. The Welsh name of the Snipe, "*giach*," is a good rendering of the cry of the bird.

JACK SNIPE, *Limnocryptes gallinula*.—A winter visitor. This diminutive Snipe is fairly numerous, appearing about the middle of September at its accustomed places on the moors, and on all boggy places where there is sufficient cover for it to hide in. We have heard sportsmen state that in seasons when Jack Snipe are plentiful, the Common Snipe is scarce, and *vice versâ*, but we have not found this borne out in our experience. The abundance of either species, at certain localities, depends entirely on the weather. In severe frosts, the birds naturally congregate about warm springs, or other damp places that remaining unfrozen afford them food. The Jack Snipe is usually solitary ; but may be occasionally met with in little flocks of upwards of a dozen, on some favourite ground, just after their arrival in the autumn, or immediately before their departure for the north in the spring.

DUNLIN, *Tringa alpina*.—A winter visitor ; perhaps, also a resident. The Dunlin is common in the autumn and winter all round the coast, wherever there are sands and oozes. Although we failed to detect it in the summer-time, on the westward front of the Precelly Mountains, we consider it extremely probable that a pair or two may nest on those hills, especially as it has been found breeding at no great distance in Cardiganshire, where Mr. J. H. Salter, of University College, Aberystwyth, discovered its nest "on a large heather-grown peat bog,

some twelve miles from the sea." (*Zoologist*, 1893, p. 269.) And, in a letter to us, Mr. Salter gives the exact locality, the Gors Teifi, and tells us "a pair or two breed here and there all over the hills, but preferably in the neighbourhood of water."

LITTLE STINT, *Tringa minuta*.—An occasional autumn visitor ; rare. This tiny Sandpiper is sometimes met with on the sands in company with the flocks of Dunlin. It has occurred on Goodwick Sands to Sir Hugh Owen, and Mr. Jefferys, of Tenby, informs us that a specimen was shot on the south sands there in September, 1893. In Mr. Mathias' list.

CURLEW SANDPIPER, *Tringa subarquata*.—An autumn visitor. To be seen in company with Dunlin on the sands, and to be easily distinguished from them by their longer legs and more upright carriage, and by the white upper tail coverts that become visible directly the birds take wing. We imagine that in spite of the distinctions we have pointed out, this species (that we always found to be common, and sometimes abundant, on the opposite coasts of North Devon) has been confounded with the Dunlin, as it does not appear in either Mr. Tracy's or Mr. Dix's lists, and is only included by Mr. Mathias. The shape of the beak, which gives the bird its name, being slightly curved, like that of the Curlew, is another distinguishing mark by which it may be readily known.

PURPLE SANDPIPER, *Tringa striata*. — An autumn visitor ; not uncommon. Mr. Tracy writes : "Rather scarce ;" but Mr. Dix considered it "about as numerous as the Knot." This species is never to be met with in large flocks, and but seldom is seen on the sands or oozes. Anyone who wants to meet with it must search the pebbly shores, on the rocks just above the water's edge, where two or three of these Sandpipers may be found running briskly along hunting for food. Even in places where it is not uncommon, the Purple Sandpiper does not appear to be often shot, and it is very rarely brought in to the

birdstuffers. It is not in Mr. Mathias' list. From its habit of running at the base of the cliffs among the rocks, with whose tints the colour of its plumage greatly corresponds, this bird may easily escape observation, and only a naturalist familiar with its habits would be competent to detect it.

KNOT, *Tringa canutus*.—An autumn and winter visitor. Flocks of Knots appear on the sand flats and oozes at the end of August and beginning of September from their breeding station in the far north. Mr. Tracy states that they were to be seen commonly every autumn near Pembroke. Also on the sands at Goodwick, &c. The flocks are foolishly tame when they first arrive.

RUFF, *Machetes pugnax*.—An occasional autumn visitor; rare. Not in any of the lists. This species, once common as a resident and nesting bird in the fen districts of England, seems to be very rarely obtained in Pembrokeshire, and we are only able to include it on the strength of a single specimen that we have seen at Cuffern, obtained by the late Mr. John Stokes, many years ago from the neighbourhood of Pembroke. It may very likely have been shot occasionally without being recorded.

SANDERLING, *Calidris arenaria*.—An autumn visitor; scarce; also sometimes seen on its passage north in the spring. The Sanderling is occasionally to be seen on the sands in September in small flocks, and one or two are sometimes to be found in company with the Dunlin and Ring-Plovers. Sir Hugh Owen has shot it on the sands at Goodwick. It has been seen on the Newgale sands, where a female was shot on June 1st, 1857, which, Mr. Tracy states, had the ovaries well developed.

COMMON SANDPIPER, *Tringoides hypoleucus*.—A summer visitor. This pretty species, which sometimes goes by the name of the "Summer Snipe," arrives about the middle of April from the

south, by which date we always noticed a pair or two by the western Cleddy beneath Stone Hall. They remained for a week or ten days, and then quitted us for their nesting places higher up the stream. When fishing the brooks that run down from the Precelly Mountains near Maenchlogog, in June and July, we always found these Sandpipers abundant, and very noisy and excited when we were near their nests or young. In company with Ring Ouzels, Dippers, Common Snipe, Wheat-ears, Grey Wagtails, and Whinchats, we were glad to welcome them, and regarded their lively presence as they flew before us up the stream with their peculiar jerking flight with pleasure, as they added the charm of beauty and interest to our ramble. Early in August the Sandpipers leave their nesting stations and descend with their young to the mouths of the streams, by whose banks they have spent the summer, and pass a couple of months on the salt marshes and in the muddy creeks adjoining the shore before they migrate southwards for their winter quarters.

GREEN SANDPIPER, *Helodromas ochropus*.—An autumn visitor.

This Sandpiper, which is larger than the preceding species, and is to be known by its conspicuous white tail, broadly barred with black, and by its shrill whistle when it is flushed, makes its appearance by the sides of pools and creeks near the coast about the middle of August, and is fairly common. It has its favourite stations on the marshes, and the places where it has been noticed one year are almost certain to be revisited season after season. Not unfrequently it occurs throughout the winter months, and is always one of the very wildest of birds, and difficult to approach. Sir Hugh Owen has seen it at Goodwick. Mr. Tracy writes: "A few of these beautiful birds may always be obtained about the margins of our fresh water rivers and ponds during the autumn and winter." Mr. Dix, in his neighbourhood, considered the Green Sandpiper scarce, but remarks that it was a regular visitor to certain spots every August, only remaining for a few days. This species differs

from other Sandpipers that place their eggs upon the ground in swamps or at the edges of ponds and streams, by always selecting the deserted nest of a Pigeon or Crow to breed in, at some considerable height from the ground. It is believed, with some probability, to occasionally nest in the British Isles, as it has been noted in every month in the year, and young birds have been met with so little advanced in plumage as to preclude the idea that they could have come from any distance.

WOOD SANDPIPER, *Totanus glareola*.—A passing migrant in the spring and autumn; very rare. Somewhat smaller than the Green Sandpiper, and to be known from that bird by the more slender bands of black drawn across the white tail, this species is only occasionally seen as a chance visitor in the British Isles. It is not included in any list of Pembrokeshire birds that we know of. We came upon a Sandpiper one day in the spring of 1886, that rose close at our feet by the side of one of the small ponds at Stone Hall, and, being very well acquainted with the Wood Sandpiper, we were both surprised and pleased to identify it in the stranger, and are thus able to add it to the County List of Birds.

REDSHANK, *Totanus calidris*.—An autumn visitor. In Mr. Tracy's time, the well-known and vociferous Redshank was a common bird in the creeks abutting on Milford Haven, and in all the marshes around Pembroke, but it appears of late years to have become scarce, even on its most favourite grounds. Sir Hugh Owen has told us that it had become rare at the time he was accustomed to shoot wild fowl about Milford Haven in his punt, where, fifty or sixty years ago, it was probably a common nesting species. He has since met with it at Goodwick, and we have seen it, in small flocks, on Newgale sands. Mr. Dix states, that in his time, it was common about the mud-flats of Pembroke river. The Redshank, is probably, still a regular autumn visitor to the county, although in greatly reduced

numbers. A flock of twelve, we learn from the Migration Report for 1883, alighted on the Tuskar Rock, seven miles off the coast of Wexford, opposite St. Bride's Bay, on May 18th, 1883.

SPOTTED REDSHANK, *Totanus fuscus*.—An autumn visitor; rare. In Mr. Mathias' list: his brother, Mr. Lewis Mathias, of Lamphey Court, shot one in the Portclew Bottoms, near Freshwater East. Mr. Mathias informs us that he had seen several from time to time in Mr. Tracy's shop at Pembroke. These were all birds of the year, and had been obtained in the autumn. Its longer bill and longer legs serve to distinguish this bird from the Common Redshank. In the nesting season it assumes a very singular plumage, in which it is black all over, save that the feathers of the back, scapulars, flank, and tail are tipped with semi-circular edgings of white, and the upper tail coverts are pure white. In this plumage it is very rarely obtained in the south-west of England.

GREENSHANK, *Totanus canescens*.—An autumn visitor. This fine Sandpiper is not very uncommon. Mr. Tracy says: "It is occasionally taken in the autumn." We have seen a fine specimen at the house of Mr. John Worthington, Glyn-y-mel, Fishguard, that was shot by Sir Hugh Owen, at Goodwick. Our friend, the Rev. Marcus S. C. Rickards, vicar of Twiggworth, Gloucester, obtained a Greenshank on Caldy Island, during a recent visit to Tenby. He writes: "Not many days after my arrival, I rowed over to Caldy Island, on the shore of which I started a Greenshank. After disembarking and walking inland, I roused a pair by the margin of a pool. They rose with the accustomed cry, and flew up the hills chasing and toying around each other in a very graceful and interesting manner. This was, to the best of my recollection, about the 25th August." The Greenshank nests commonly by the sides of lochs in the north of Scotland.

BAR-TAILED GODWIT, *Limosa laponica*.—An autumn visitor ; to be seen occasionally on its passage northwards in the spring, when it is in its bright chestnut breeding plumage. This species is not uncommon on the sands and mud-flats around the coast in September, when all the birds are in their ash-grey winter plumage, some few of the adults still retaining a few of the rufous feathers upon the breast. Mr. Tracy states that it was common in his time around Pembroke ; Sir Hugh Owen has met with it in small flocks on Goodwick sands, and Mr. C. Jefferys, of Tenby, has informed us of one that was shot on the south sands there in September, 1889. On their first arrival the Godwits are very tame, and the flocks will permit the gunner to walk up to them where they are feeding on the ooze in a straggling line ; the outer birds will run in towards the main body on his approach, and the compact mass of birds will afford the chance of a successful shot. We have, ourselves, had great sport on many occasions on the mud-flats of the North Devon rivers, and as these birds are excellent for the table we always found them to be greatly appreciated by the friends among whom we distributed our spoils. The Bar-tailed Godwit nests in the far north of Lapland, &c., and well authenticated eggs are scarce in collections.

BLACK-TAILED GODWIT, *Limosa algocephala*.—An occasional autumn visitor ; rare. This is a bird with rather longer legs and bill than the Bar-tailed Godwit, and although it was formerly one of the waders that each spring visited the fen districts in the east of England to nest it is now everywhere scarce, and only an uncertain visitor either in the spring or autumn. Mr. Tracy merely remarks that it is "scarce," without giving particulars of occurrences. It is included by Mr. Mathias in his list, and Sir Hugh Owen informs us that he has shot it at Goodwick.

WHIMBREL, *Numenius phaeopus*.—A passing migrant ; seen on the coasts in May and again in September when it is passing South-Common. Mr. Tracy writes : "I strongly suspect this bird breeds in the county, but I have been unable to find its eggs

I have watched several pairs, during the summer months, so late as the latter end of June, that had every appearance of having nests in the locality, but without success. They then generally leave us about two months, as I do not see them again until the latter end of September." The Whimbrel breeds in the Orkney and Shetland Islands, and its nest has not yet been detected elsewhere in the British Islands. On the last day of May, 1884, we were on Skomer Island, where we nearly trod upon a Whimbrel among the fern. The bird ran slowly off with trailing wings, and all the gestures of a bird just started from its nest, until she disappeared the other side of a hillock. We were following in pursuit of a wounded bird at the time, and unfortunately did not pause to search for a nest, and when we returned subsequently to do so we found that we had lost the position, and our investigations were fruitless. It would have been very interesting to have taken eggs of the Whimbrel so far to the south.

CURLEW, *Numenius arquata*.—Common on the coasts, especially in winter, when it is seen in flocks. Single birds often heard and seen flying overhead some distance inland. We have found pairs of Curlews in June on the summits of the Precelly Mountains, and have little doubt they were nesting. During severe frosts in the winter, Curlews visit the fields to search for food, and Mr. Dix states that a flock of five appeared on a water meadow near his residence, and, although the birds were very watchful, one was shot, which proved in good condition. We believe the Curlew occasionally nests on Skomer Island.

ARCTIC TERN, *Sterna macrura*.—Seen commonly on passage in the spring and autumn in the estuaries and off the coast, at Milford, &c. Also in Goodwick Bay, where it has occurred to Sir Hugh Owen.

COMMON TERN, *Sterna fluviatilis*.—A common migrant off the coast in spring and autumn. We learn from the boatmen that there is a small colony of Common Terns on Skokholm Stack.

In the spring of 1884, we were told that about twenty pairs might be counted there. Some Common Terns were seen on the Tuskar Rock on May 24th, 1883; and others were noticed passing to the south-west, until May 27th. Some of these birds may have been on their way to Skokholm.

ROSEATE TERN, *Sterna dougalli*.—Now only a rare visitor, but perhaps, formerly a regular summer visitor, and nesting on Skokholm Stack, where Mr. Mathias has informed us that some used to breed in company with the Common Terns. Mr. Mathias, who knows this beautiful species well on wing, has several times (but not in recent years) seen Roseate Terns fishing off the east shore of Dale parish within Milford Haven. The disappearance of the Roseate Tern from the south-west of Pembrokeshire cannot be accounted for, as we have no belief that it was ever shot down or its nests robbed, and can only be set side by side with its vanishing from the Scilly Islands causelessly, and from other localities on our coasts that it used to visit. The latest Pembrokeshire example of this now rare bird that we can mention is one reported to us by the Rev. Clennell Wilkinson, rector of Castle Martin, a beautiful adult in perfect plumage, that was picked up dead some way inland in the neighbourhood of Pembroke, in 1885.

LITTLE TERN, *Sterna minuta*.—Occasionally seen on the coast when passing. In Mr. Mathias' list. Has occurred to Sir Hugh Owen at Goodwick. A stuffed specimen is preserved in the Bank at Fishguard.

[**SANDWICH TERN**, *Sterna cantiaea*.—Although this species is not included in any of the lists, we feel certain that it must occasionally visit the Pembrokeshire coasts, the Milford Haven estuary, the neighbourhoods of Tenby, Fishguard, &c. But we must at the same time state that it is very rarely seen off the North Devon coast.]



LANDING PLACE, GRASHOLM, WITH KITTIWAKES ON THEIR NESTS.

BLACK TERN, *Hydrochelidon nigra*.—Seen occasionally on its passage in the autumn. The Rev. Clennell Wilkinson has seen Black Terns flying over a large pool of fresh water on the Burrows in Castle Martin parish, and Sir Hugh Owen has shot it at Goodwick. Included in Mr. Mathias' list. The Black Tern is a lacustrine species, and may often be met with flying over pools in salt marshes near the coast. In such places we have frequently seen it, the birds hawking about like large Swallows.

KITTIWAKE, *Rissa tridactyla*. — An abundant resident. This pretty species is by far the most numerous of the Pembrokeshire *Laridæ*. Great numbers nest on Ramsey, Skomer, and Grasholm Islands ; also in places on the cliffs of the mainland, as on cliffs at Flimstone, adjoining the Stack Rocks near Pembroke, where there is a large colony, &c. A breeding station of the Kittiwake is a very interesting scene. On the ledges of the cliff nearest to the water, and rising tier above tier, the nests are thickly placed, and are constructed of seaweed lined with grass, and look white from the droppings of the birds. The Kittiwakes, sitting on the nests, look like white Doves, and the cries of the birds fill the air. The Kittiwake is a maritime species, and is never found away from the coast, unless it is blown inland by violent gales, and is never to be seen in company with the Common and Brown-headed Gulls searching freshly-ploughed fields for worms.

GLAUCOUS GULL, *Larus glaucus*. — A winter visitor ; rare. Specimens of this splendid Polar Gull are occasionally obtained upon the coast. There is a fine adult, with a white mantle, in the Stackpole collection, that was shot many years ago, near Tenby. In the winter of 1891, Mr. C. Jefferys, of Tenby, informs us that he several times saw a Glaucous Gull flying about in company with Herring Gulls.

HERRING GULL, *Larus argentatus*.—A common resident. The

Herring Gull may be seen on our coasts all the year, and nests in great numbers upon the various islands, and also on many of the cliffs on the coasts. Since the Sea Birds' Preservation Act this Gull has greatly increased in numbers, and on Skomer Island devours so many of the young rabbits, as to occasion serious loss, as we were informed by Mr. Vaughan Davies, the tenant. One of the sights of St. David's is the number of Herring Gulls that may always be seen in the fields surrounding that romantic little cathedral city. In the spring our fields at Stone Hall were visited by flocks of Herring Gulls, and, at all times of the year, in rough weather, numbers of the birds forsaking the shores would be seen searching the fields for food far inland. We have received from Mr. C. Jefferys, of Tenby, a very pretty photograph of a Herring Gull's nest, taken *in situ*, with the three speckled eggs clearly visible. The nest is a large, untidy structure of grass.

LESSER BLACK-BACKED GULL, *Larus fuscus*.—A common

resident. Not so numerous as the Herring Gull, this species is nevertheless, well represented in Pembrokeshire, and nests upon the various islands, selecting the ground on the topmost slopes of the cliffs, and there breeding in small societies of from twenty to thirty pairs, apart from the other Gulls, in places where it is perfectly easy to walk among the nests, and to admire the beautiful clutches of eggs. This Gull is also a greedy stealer and devourer of other birds' eggs, young rabbits, &c., and like the Herring Gull, comes far inland, visiting the meadows in the spring, at which season we always saw some in our fields at Stone Hall, in company with the Common and Herring Gulls.

COMMON GULL, *Larus canus*.—An autumn and winter visitor.

Although named the "Common" Gull, this species is by no means so numerous either as the Herring Gull, or the Kittiwake, and does not nest with us, going northwards in the spring

to its breeding stations in Scotland, where it places its nest on the ground at the edges of lochs. It is to be seen commonly on the sands and mud flats on the shore during the winter, and also very often on fields inland, and we have often been amused by watching the scrambles between the Rooks and the Common Gulls for worms when the birds have been closely following the plough. In the winter of 1886, we several times saw, and once or twice got very close to, a perfect albino Common Gull that, with other Gulls, daily visited a field near Stone Hall. The Common Gull was reported by Colonel Montagu to nest upon Ramsey Island, but the nests he describes are evidently those of the Kittiwakes.

GREATER BLACK-BACKED GULL, *Larus marinus*.—Resident.

A few pairs of this fine and powerful Gull nest upon the islands off our coasts. Mr. Mortimer Probert has taken its eggs on the Bishop's Rock, near St. David's, and we are informed by Mr. C. Jefferys, of Tenby, that a pair have nested on St. Margaret's Island, a small island connected by a reef of rocks, dry at low water, with Caldy. The eggs were twice taken from this nest in the summer of 1892. Mr. E. H. W. Blagg, of Cheadle, Staffordshire, tells us that a pair of great Black Backed Gulls nested on St. Margaret's Island in 1887, when he was visiting Tenby, and that there were three eggs in the nest on June 10th. It is probable that there are other nesting stations of the birds on our coasts, where we trust they may be unmolested by the egger. The Greater Black-Backed Gull seldom leaves the shore, but we have occasionally noticed a pair in fields adjoining the coast. Mr. J. H. Salter, of Aberystwyth, writes to us that he sees the Great Black Backed Gull "about the 'llyns' or pools on the hills in March; it seems to go up there for the lambing season, when Ravens and Buzzards are also specially busy."

BROWN-HEADED GULL, *Larus ridibundus*.—An autumn and winter visitor. Common on the coast, and often to be seen on fields inland, in company with Common and Herring Gulls.

There is no nesting place of this pretty species, that breeds on the ground in swampy places, and by the edges of lakes, in Pembrokeshire, nor in any of the adjoining counties that we can discover. Indeed, the only place in the Principality that we at present know of (we consider there must be some others) where the Brown-heads nest, is on Mochras Island, on the coast of Merionethshire, where Mr. J. H. Salter found empty nests and other traces that the birds had reared young, at the end of June.

LITTLE GULL, *Larus minutus*.—An occasional visitor ; rare. Mr. H. Mathias informs us that examples of this small species, that is no larger than a common Pigeon, have been obtained in the county, but can furnish no particulars, and has not included it in his list of birds supplied to Mason's Guide to Tenby. We are indebted to Mr. C. Jefferys, of Tenby, for telling us of the occurrence of an adult Little Gull in winter plumage, at that watering place, on the south sands, at the beginning of January, 1892. This specimen is now in the Tenby Museum, and we have a very pretty photograph of it, with its wings extended, that was kindly forwarded to us by Mr. C. Jefferys. There were two seen when this bird was obtained, but the other, being only slightly wounded, succeeded in escaping. As the Little Gull has been observed at Lundy, and has frequently been obtained on the coasts of Devon and Somerset, it is evidently no very great stranger in the Bristol Channel, and we consider that it must sometimes enter the fine harbour at Milford Haven, where, no doubt, some of those mentioned by Mr. Mathias were obtained.

SABINE'S GULL, *Xema sabinii*.—A rare, occasional straggler from the far north ; only three occurrences. In Mr. Mathias' list. One killed by a keeper of Lord Cawdor was seen by Mr. Mathias in Tracy's shop, at Pembroke. This was a young bird in the first year's plumage, and is now in the collection at Stackpole. In the first edition of his well-known work on "British Birds,"

page 422, vol. iii., Mr. Yarrell states: "I have notes of one killed at Milford Haven, in the autumn of 1839." Then, in the *Zoologist* for 1892, page 423, Mr. Charles Jefferys, of Tenby, relates the capture by himself of an immature Sabine's Gull, on November 12th, that year, near the village of Amroth. "There was a strong wind blowing in shore and a heavy sea. It was late in the afternoon, almost dusk, and the bird was flying along the surf-line, as if looking for food. It was in good condition, and is now being preserved." Mr. C. Jefferys has since informed us that this specimen is now in the Kelvin Grove Museum at Glasgow. Sabine's Gull is another very small species that is extremely rare in this kingdom in its pretty adult plumage in which it has a dark, lead-coloured cap and throat, the latter encircled by a black ring. It breeds beyond the Arctic circle, and its forked tail, and the angle at the symphysis of the under mandible, make it to be easily distinguished in all plumages from the Little Gull, with which we have known it to be occasionally confounded. After rough weather in the autumn this small Gull is not very rare along our south-western coasts.

GREAT SKUA, *Stercorarius catarrhactes*.—The Skuas, or Parasitic Gulls, pass our coasts in the autumn on their way south from their breeding stations in the north. In fine weather they keep far out at sea, and it is only after exceptionally severe gales that some of them are seen on the coasts. The Great Skua, a very powerful and courageous bird, has nesting places on the Shetland Isles, at Unst and Foula, where they are now preserved, or they would soon have become exterminated by collectors of birds' skins and eggs. All the Skuas kill and devour other birds, and are greedy feeders upon carrion, and will chase and rob other Gulls of their fish. The Great Skua is included by Mr. H. Mathias in his list. He saw a specimen in Tracy's shop at Pembroke. Sir Hugh Owen informs us that it is always to be seen in Goodwick Bay in a good herring season; that he has noticed it to be a very bold and savage bird, and that he has shot it on Goodwick sands while eating carrion. It is dark

fulvous in plumage, has some golden hackles on the throat, is the largest of the Skua family, and may be at once known from all the other species through the absence in its tail of any elongated central feathers. The Skuas in some years continue in southern waters until the spring is well advanced. On May 28, 1883, "hundreds of Skua Gulls" were noticed off the Tuskar Rock, opposite St. Bride's Bay; more on 31st; while others were observed on June 7th, 8th, and even on June 22nd (Migration Report, 1883).

POMATORHINE SKUA, *Stercorarius pomatorhinus*.—This species comes next in size to the Great Skua, and possesses in its adult plumage two elongated central feathers in its tail which *broaden towards their tips*. It is by far the commonest of the family upon our coasts, and a few are to be seen every autumn, and after heavy gales large flocks are observed. Dr. Probert possesses one, an immature bird that we have seen at his house in St. David's, that was shot on Ramsey Sound. Sir Hugh Owen has seen this Skua in Goodwick Bay, in all stages of plumage, and calls it "the most falcon-like of the Gull tribe."

RICHARDSON'S SKUA, *Stercorarius crepidatus*.—This is a smaller species, to be at once recognised in the adult, by the two long and *pointed* central tail feathers. It is more scarce on our south-western coasts than the Pomatorhine Skua, but a season rarely passes without one or two being noticed. Sir Hugh Owen has shot an immature bird at Goodwick. There are two well-marked varieties of this species, one with a white breast and underparts, the other black all over, and in the black birds the blackness differs in its intensity, in some being of a rusty colour, in others of a deep coal black. The two varieties freely interbreed, the result being birds of a mottled plumage. We have seen examples pied black and white, the patches of the two opposite colours being symmetrically placed, and giving to the birds a very peculiar appearance.

BUFFON'S SKUA, *Stercorarius parasiticus*.—This, the smallest of all the Skuas, also called the Long-tailed Skua, from the extreme length of the two central *pointed* tail feathers, appears, for the main part, to accomplish its migrations along the eastern shores of the kingdom, as its appearance upon our western coasts are so irregular as to be quite accidental. In the stormy autumn of 1891 a number of these Skuas were blown into the Bristol Channel, and many were obtained upon the opposite coasts of Devon and Somerset, and some, no doubt, put in at Milford Haven, but we are without record of any. The only county specimen of which we have knowledge is a young bird in the plumage of its first autumn that was sent to us for examination by Mr. C. Jefferys, of Tenby, where it had been shot while flying over the South Sands one day in the autumn of 1889 or 1890. We were able at once to decide that it was a young Buffon's Skua, from the distinguishing test furnished by Mr. Howard Saunders in his very useful Manual of British Birds. He points out that the "readiest distinction, at any age, is to be found in the shafts of the primaries. These are *all white* in the Arctic (Richardson's) Skua, whereas in the Long-tailed Skua *the two outer ones only* on each side are *white*, the rest being dusky." Our friend, Mr. W. S. M. D'Urban, of Exmouth, possesses an example of Buffon's Skua, from the coast of South Wales, one that was shot in January, 1892, at Rumney, near Cardiff. All the Skuas are carnivorous, and besides feeding on fish, will greedily devour dead animals, and will strike down and eat other birds. A specimen of Buffon's Skua, obtained some years ago in Somerset, had actually struck down a Ring Dove, a bird as large as itself, upon which it was feeding, when it was disturbed and shot by a keeper.

STORM-PETREL, *Procellaria pelagica*.—This tiny Petrel, commonly known by the name of "Mother Carey's Chicken," is resident on Skomer Island, where it nests in the chinks of an old wall on the top of the cliff, and probably nests also on other islands off the Pembrokeshire coast. When we were on Skomer on the

last day of May we visited this wall, but as the Storm-Petrels are late in breeding there were no eggs there then, although we distinctly perceived the unmistakable Petrel odour clinging in places to the stones, showing that the birds were at that time visiting the wall. The Storm Petrel does not lay its single white egg before the end of June, or even later, for in the Zoologist for 1886, p. 457, the Rev. H. A. Macpherson mentions an adult and nestling that he saw in Leadenhall market, in London, as late as 20th September. Both, he was told, had come from Skomer; the nestling was taken on 18th September, and was fully feathered, but still retained some of the sooty down, especially upon the belly. After severe gales the little Storm Petrel is occasionally picked up inland at some distance from the coast. In stormy weather in the autumn some are captured at the Light House on the South Bishop's Rock; on the night of October 14, 1883, eight were taken; it was misty weather, with a S.E. breeze, and a drizzling rain. A great number of small birds struck that night against the light, ninety were killed, and two hundred were taken in a net. Three "Falcon Hawks and a Large-horned Owl" were also present, and "made sad havoc among them" (Migration Reports, 1883). It seems strange that the Storm-Petrels should be betrayed into danger by the glare of the Light House lights. One would have thought that, from being always about and skimming over the water at night time, they would have become accustomed to the lights; we can only suppose that in misty weather they are bewildered and become reckless, and so approach too near to what in ordinary weather they would be careful to avoid.

LEACH'S PETREL, *Procellaria leucorrhœa*.—This is a little larger than the Storm-Petrel, is of a browner black, has a grey line across the edges of the wing-coverts, and a deeply forked tail, so that one of its common names is the Fork-tailed Petrel. It is not known to breed on any of our islands, but it is not very rare, as a visitor in stormy weather, and, like the Storm-Petrel, is occasionally picked up inland. The Rev. Clennell Wilkin-

son believes that a Petrel seen by him skimming over a pool in the Burrows in his parish of Castle Martin one day in the summer was a Fork-tailed Petrel. Mr. Dix states that it has been taken several times after severe storms in Milford Haven, and saw one in Tracy's shop in Pembroke that had been picked up near that town.

MANX SHEARWATER, *Puffinus Anglorum*. — Local name "Cockle." Resident. The Manx Shearwater is, without doubt, the most interesting of our Pembrokeshire birds, from the fact that Skomer Island is the largest breeding-station, and may be considered the metropolis, of the species in the British Isles. The numbers there are almost incredible. And yet any visitor to Skomer in the day time, who left the island before night, would probably fail to see a solitary Shearwater, and if he was ignorant of the indications of their presence, might depart quite unaware of the vast bird population slumbering beneath his feet. For, during the day, the "Cockles" are all asleep in their burrows; some of these they have stolen from, and perhaps share with the rabbits, others they have excavated for themselves. Some of the burrows go straight in, but the greater number have various turns and twists, so that it is a tedious business, sometimes, to dig to and to reach the single white egg, which is almost the size of an ordinary hen's egg. We have sometimes met small parties of these Shearwaters abroad on the sea during the day-time, and during the autumn we have seen the water covered by large flocks of them throughout the day, but certainly at the nesting season they are almost exclusively nocturnal, and do not come out from their holes to feed until quite late at night. One beautiful summer's night that we spent on Skomer, with Mr. Mortimer Propert, for the purpose of making acquaintance with the Shearwaters, we were greatly surprised at the late hour they emerged from their burrows. We went out several times after sunset to search for them, but all in vain, none had appeared. Several times we resumed our game at whist in Mr. Vaughan Davies' hospitable

house, before we went out and were successful in discovering that the birds were at last upon the move, and this was close upon eleven p.m. The birds were then flying in numbers over the ground to and fro about the height of our heads, almost brushing our faces as they flitted past. Their strange wailing cry resounded on all sides, and they kept up an unearthly chorus until the first streak of dawn. We saw numbers come forth from holes at our feet, flapping with their wings for a yard or two along the ground before they were able to rise into the air, and it seemed as if it was necessary for them that the ground should slightly incline downwards, in order that they might gain a bite upon the air. The old sheep-dog of the farm was with us, and amused herself by catching the Shearwaters one after another, and bringing them uninjured to our hands. Not wanting any, we would then toss them up into the air, and let them go, once or twice getting the benefit of a vomit of the greenish oil which the bird is able to discharge, either when frightened, or for the purpose of defence. We watched the birds for a long time in the calm and semi-twilight of the beautiful night, and it appeared as if they flew about the island for a long time before going out to sea, and that others were constantly coming in again from the water. There seemed, indeed, no diminution in the numbers flying over the island all through the night, for when we at last retired to bed, we still heard the same wailing cries, often close outside our bedroom window. It was not until day dawned that the chorus gradually died away, and rising early, and going out to take a walk over the island, we detected but a single Shearwater sitting at the entrance of its burrow, into which it scuttled on our approach. Thrusting our arm inside, we found that it was a straight burrow, as, lying down, we were just able to touch the egg at its end, also the bird. Mr. Vaughan Davies informed us that one year he ploughed cartloads of the poor "Cockles" into the ground for manure, setting boys at night to knock them down with sticks, and to kill them, as they came out of their holes. Numbers of Manx Shearwaters nest on the adjoining island of

Skokholm, which is uninhabited, and is merely a summer run for sheep. A few may nest on Ramsey Island, and we have seen the birds in Ramsey Sound, but Mr. Mortimer Propert is not sure that they do. The Shearwaters are occasionally seen in flocks in Fishguard Bay. We were for some time doubtful, and rather incredulous, as to any Shearwaters nesting on Caldy, which in our opinion seemed too tame an island for them, but after the evidence that we subjoin, it is without question that a few do so, or at least upon the connected island of St. Margaret's. In the summer of 1887, Mr. E. W. H. Blagg, who was then staying at Tenby, informs us that several evenings he saw a large flock of Manx Shearwaters flying off Caldy Island, and believed that the birds nested there. Mr. Dix states, "numbers breed at Caldy Island," but we had an idea that they had ceased to do so since he wrote this, a quarter of a century ago. On several occasions, when we ourselves have visited Tenby, on making inquiries, we failed to find anyone who could tell us if there were still Shearwaters upon Caldy; indeed, we were once expressly told that no such birds were known upon the island. Writing to us upon this point, Mr. C. Jefferys, of Tenby, states: "The Manx Shearwater *used* to breed upon Caldy, and I think a few still do now in the fissures of the cliffs. I can give you more decided information about St. Margaret's Island, which, as you know, is connected with Caldy by a reef of rocks, dry at low water. While on this island last May (1893) I frightened out of holes and fissures four or five Manx Shearwaters; they appeared to come from cracks about half-way down the cliffs, and may, or may not, have been nesting there; it certainly looks as if they were." We believe, ourselves, that the "Cockles" only frequent and nest on islands where there is a sufficient quantity of soil upon the top for them to dig their burrows, and that they are for this reason absent from islands that are mere rock, but this would certainly not apply to Caldy, which is suitable to the birds in every respect, except that it is too much run over, and the birds may therefore have been frightened away from it.

GREATER SHEARWATER, *Puffinus major*. — An occasional visitor; rare. Writing to us on September 18th, 1886, the Rev. Clennell Wilkinson, rector of Castle Martin, says: "The Greater Shearwater I think I have seen washed up dead on the shore, but that was some years ago, and I am not now very certain about it." This is a considerably larger and lighter coloured bird than the Manx Shearwater, and is an irregular visitor, sometimes in large flocks, from the Atlantic to the coasts of Devon and Cornwall, and is well known to the people of the Scilly Isles, so that it very probably enters the Bristol Channel occasionally, and may occur in Milford Haven, &c.

FULMAR, *Fulmarus glacialis*. — A very rare accidental straggler in the autumn and winter. This, the largest of the British Petrels, is a well-known Polar species, inhabiting a few islands to the extreme north of the British Isles; St. Kilda, a remote island of the Hebrides group, being its metropolis, and here the birds annually resort to nest in incredible numbers. When obtained anywhere in the south, the Fulmar is generally picked up, sometimes inland, either dead, or in an exhausted state, when it is incapable of flight. There is only a single instance of its occurrence in Pembrokeshire, and this was one that was brought alive to Mr. C. Jefferys, of Tenby, in December, 1890, having been caught on a cod line in Tenby Bay.

GREAT NORTHERN DIVER, *Colymbus glacialis*. — A winter visitor. The Great Northern Diver is a regular visitor in the winter to our bays from the north, and is sometimes numerous in Milford Haven. Adults, in full plumage, are rare. Mr. Dix states that, after a severe gale, one was shot in Milford Haven, at the beginning of December, 1865. Sir Hugh Owen has shot the Great Northern Diver in Fishguard Bay. Immature birds are most frequently obtained. From its powers of diving, its rapid progress beneath the water, where it uses both wings and feet, it is difficult for a boat rowed by good oars to overtake the Great Northern Diver, and, as it can keep its body sub-

merged, only showing its head and neck above the surface, sinking again in a second at the flash of the gun before the shot can reach it, its pursuit is not easy, and, as we have ourselves witnessed on several occasions, it succeeds in making its escape, or does not succumb until after a long chase. The Great Northern Diver remains on the waters off our coasts until the end of April; from the Tuskar Rock Lighthouse we have the report that the "Black Divers" disappear about May 1st, and are not seen again until the following October.

BLACK-THROATED DIVER, *Colymbus arcticus*.—A winter visitor.

The Black-Throated Diver, a very beautiful bird in its full breeding plumage, nests on some of the lochs in Scotland, and comes south in the autumn and winter. It is by no means a common bird on the south west coasts, and our only authority for giving it a place among the Birds of Pembrokeshire is its being included by Mr. Mathias in his list. It is considerably smaller than the Great Northern Diver, and although immature birds of both species are alike in plumage, the Black-Throated Diver may be always recognised by its smaller size. As we have frequently shot the Black-Throated Diver in the winter months on the North Devon tidal rivers, the Taw and Torridge, we have no doubt that it visits Milford Haven, where it may have been obtained and confounded with the commoner species of which we have next to write.

RED-THROATED DIVER, *Colymbus septentrionalis*.—A winter

visitor; common. Sometimes called the Speckled Diver, from its pretty spotted back, this is the commonest of the three large Divers that visit our bays and estuaries in the winter. Like the Black-Throated Diver, the Red-Throated Diver also nests on the Scotch lochs, where it is a familiar bird. It is common in the winter in Milford Haven, Fishguard Bay, &c. Its spotted back makes it readily distinguishable from the immature Black-Throated Diver, whose back is without spots. In its full adult plumage

it has a red throat, and the top of the head and sides of the neck are bluish grey, with white and black lines running down the back of the neck, and on the back the white spots of the winter dress have become so small as almost to have disappeared. Our own acquaintance with the various Divers was made in the estuaries of Devonshire, where we have occasionally seen the Red-Throated Diver in flocks of a dozen or more. Writing from Aberystwyth, Mr. J. H. Salter informs us that on April 5th, 1893, he observed Red-Throated Divers passing northwards, and that he had nearly twenty in sight at once.

GREAT CRESTED GREBE, *Podiceps cristatus*.—A winter visitor.

Not very common in Pembrokeshire. Sir Hugh Owen has seen it at Goodwick. Mr. Dix says: "A few are seen during the winter, but invariably in immature or winter plumage." However, Sir Hugh Owen appears to have met with it in its adult dress, as he informs us he has seen both the Great Crested and the Tippet Grebes, the latter being the common name of the bird in its full plumage.

RED-NECKED GREBE, *Podiceps griseigena*.—A winter visitor; rare. Mr. Dix was informed by Mr. Tracy that he had several times killed examples of the Red-Necked Grebe, the rarest member of the family in the south west of England, on the mill-pond at Pembroke. This species is not included by Mr. Mathias.

SCLAYONIAN GREBE, *Podiceps auritus*.—A winter visitor; rare.

According to Mr. Dix a few specimens of this Grebe occur every winter in their immature or winter plumage. Mr. Mathias omits it from his list. It used to be the commonest of all the Grebes in the winter time on the North Devon rivers, where we have frequently shot it, and have sometimes seen three or four of a day. It is thus likely to occur on the Pembrokeshire side of the Bristol Channel. It is a much smaller species than either the Great Crested Grebe or the Red-necked Grebe.

EARED GREBE, *Podiceps nigricollis*.—A winter visitor; rare. In Mr. Mathias' list. Mr. Tracy informed Mr. Dix that he had several times obtained the Eared Grebe on the Pembroke river. As they come upon our list the Grebes diminish in size one after the other, and the Eared Grebe is smaller than the Slavonian Grebe, and the immature and winter plumaged birds may be separated from one another by a glance at their bills. In the Eared Grebe the bill curves slightly upwards, but in the Slavonian Grebe it is straight. Although all the Grebes in the nesting season frequent fresh water ponds and lakes, yet in the winter they occur in salt water, where we have met numbers of every species on the British list at different times diving and fishing among the rocks and sea weed, or in the shallow water close to the shore.

LITTLE GREBE, *Tachybaptus fluviatilis*.—Resident. The Little Grebe, or Dabchick, as it is most commonly called, is the smallest of the Grebe family, and is the only one that nests in Pembrokeshire, and commonly throughout the British Isles. It is more frequently seen in the winter months, because then there is less cover of aquatic vegetation in which to conceal itself. We have seen it on the Cleddy, beneath Stone Hall, and in hard weather noticing two or three on the water in company have occasionally stalked them, as from a distance we have taken them for Teal; but as we approached their diving at once revealed to us what they were. The Little Grebe frequents pools, lakes and the still waters of rivers and streams wherever there is sufficient cover to hide, and here it can easily escape detection, as it will dive, and when it comes up again to breathe will do so among the leaves and rushes by the bank, where it only thrusts its head above the surface and cannot be seen. We have amused ourselves by watching them diving in this way in our fish ponds, and although quick sighted and familiar with their habits, they very frequently managed to come up somewhere where we could not see them. Like all the other Grebes this small species visits the tide-way in the winter, where we have seen and shot it in salt water.

RAZORBILL, *Alca torda*. — Resident. The great multitude of cliff birds to be seen in the summer months on the various islands off the Pembrokeshire coast, is one of the unique features in the Ornis of the county. No one who has once visited in May or June the beautiful islands of Skomer or Ramsey, will ever forget the spectacle that has been presented to his eyes, whether he be an ornithologist or not. The celebrated Stack Rocks, being within an easy reach both from Tenby and Pembroke, are among the curiosities of the county which all tourists feel compelled to inspect. And the scene is one that well repays the trouble of journeying to the spot. Caldy, St. Margaret's Island, Skokholm, Skomer, Grasholm, and Ramsey, besides various cliffs of the mainland, are all of them, to a greater or less degree, visited by Razorbills, Puffins, and Common Guillemots at the nesting season; and while the Puffins lay their eggs in rabbit earths or in holes they excavate for themselves, the Razorbills and Guillemots deposit their eggs, without the least semblance of any nest, on the ledges of the rocks, tier above tier. From our own experience, we are confident that if a census were to be taken of the three birds we have mentioned, the Puffins, in their innumerable myriads, would exceed the other two put together, and then, perhaps, in the proportion of ten to one; the Guillemots are very numerous, and would rank next, and last of all would come the Razorbills that, although when regarded by themselves might justly be considered abundant, are yet not to be compared with the extraordinary hordes of Puffins and Guillemots. As they fly off the ledges of the cliff beneath one's feet, as they pass one in the air, or as they alight on their eggs on their return from the water, or when viewed on its surface, swimming and diving in small parties, the Razorbills, with their brown-black heads and backs, and pure white underparts, present the appearance of great neatness in their brightly contrasted plumage. The white lines, too, across the mandibles, above the eyes, and across the wings, are also plainly visible to the spectator, when the birds approach him, as they will fearlessly, if he only remains quiet.

And all the while the air will be full of their crooning cry, and the noises to be heard at any great breeding station of cliff birds, Kittiwakes, &c., are also part and parcel of an experience new and strange. After heavy and continued gales in the summer and early autumn, countless cliff birds perish from starvation, as they are then feeble from their moult, and unable to capture the fish that desert the shallows around the shores, and seek refuge from the tempest in deeper water; and, at such times, we have seen the sands (on the North Devon coast) strewn for miles with Razorbills, Guillemots, and Kittiwakes, and every wave has cast others, dead or dying, to our feet. Varieties of the Razorbill are very rare. Indeed, the only one we have ever heard of is one sooty-black all over, with the exception of a dozen or two small white feathers scattered about the breast, that Mr. C. Jefferys, of Tenby, has mentioned to us, that is now in the museum of the Hon. Walter Rothschild, at Tring, and was obtained at Tenby about the year 1886. As soon as the young birds are strong enough to fish and to maintain themselves, and this is about the beginning of August, the cliff birds leave their nesting stations, and scatter over the open sea, many of them working towards the south, but numbers ascend the Bristol Channel, where they may be seen in little flocks throughout the winter, and we have ourselves encountered them in December and January as far up as the Severn Tunnel in the old days when we used to make the passage across in the paddle-box steamer to Port Skewet. The eggs of the Razorbill are very handsome, and beautiful varieties are met with. The collection of cliff birds' eggs formed by Dr. Propert from Ramsey Island, is hardly to be surpassed, except, perhaps, by that belonging to the national collection of British birds' eggs at South Kensington, and any ornithologist who finds himself at St. David's ought to inspect it, and will be sure to meet with a courteous reception.

COMMON GUILLEMOT, *Lomvia troile*.—Resident. The Common Guillemot is the well-known "Eligoog" of Pembrokeshire; the Stack Rocks, on which they nest in such numbers as almost

completely to cover them, being often called "the Eligoog Stacks." What we have written above with respect to the Razorbill, applies almost in so many words to the present species. It is to be found upon all the islands, on some of them, as upon Ramsey, in extraordinary numbers, and upon some of the cliffs of the mainland. Three parts of the year the Guillemots, as well as the other cliff birds, are dispersed upon the open sea. They only resort to the islands and cliffs for the summer months for the purpose of rearing their young. We have visited the Stack Rocks in the early spring before the birds had arrived upon them, only to find a few Herring Gulls and Kittiwakes perched on their ledges, a Shag or two on the rocks just above the sea level, and a pair of otters disporting themselves among the waves that lapped their base. A few weeks later, and there would have been a transformation scene! The Stacks would have been white with birds, the waters in their neighbourhood would have been dotted over by little parties diving and fishing, and there would have been an almost deafening noise proceeding from the multitude of birds. The Stacks are two in number, distant some sixty or seventy yards only from the shore, and reach in height almost to the level of the cliff on whose top the spectator stands. The largest of them is said to be only about thirty yards across on the summit, and they both present the appearance of rocky towers rising out of the water. The birds cover them from top to bottom, and are huddled together on their tops as close together as they can pack, but as the spaces after all are small, the total number of birds cannot be large, and there is not on these Stacks and on the cliffs in their neighbourhood, any more than a mere fraction of the immense numbers to be found on Ramsey or Skomer, where the birds are distributed over a great length of cliffs. But even on these two islands the birds are not found everywhere, having their favourite cliffs, which are densely thronged with them, while others are quite destitute of birds. Mr. Dix rowed round the Stack Rocks one day, to discover that the Guillemots were more numerous on their ledges fronting the sea

than they were on those turned towards the land, although even on these the numbers were astounding. Like the other diving birds that pursue the fish beneath the water, the Guillemots use their wings, and may be said to fly under the waves. One is able to form some idea of the vast myriads of fish the seas around our coasts must contain, when we consider the millions of birds that are daily feeding upon them. No amount of netting by fishermen is likely to produce any impression upon the shoals of fish; the only injury that man can inflict upon them is in dredging the spawning beds. If only these could be left in quiet, there would be no danger of our fish supply becoming exhausted, however persistent and united the attacks made upon it by larger fish, seals, birds, and fishermen. The variety called the Bridled Guillemot (once held to be a distinct species, and called *Lomvia lacrymans*), that has a white line curving a short distance down the neck on either side from the eye, occurs occasionally among the other Guillemots, but is rare; Mr. Mathias includes it in his list. On each of our visits to the breeding stations of the birds, we have kept a close watch for it, but among the thousands of Guillemots we have closely approached on their ledges, we have never succeeded in detecting one. The eggs of the Common Guillemot are well known for their beauty, and one or two are generally carried away by visitors to the Stacks as "curios." Some very beautiful varieties may be picked out from among them, and we are not a little proud of our own series procured from Ramsey and Lundy. The farmers around St. David's are said to feed their calves in the summer with a custard made from the "Eligoogs'" eggs obtained on Ramsey. In the winter time we have seen numerous Common Guillemots far up the Bristol Channel, off Clevedon and Portishead, and often when we have been crossing the ferry to Port Skewet, in company with Razorbills.

[**BLACK GUILLEMOT**, *Uria grylle*.—A century ago there were a few Black Guillemots resident on the Pembrokeshire coast. Colonel Montagu, writing in his Ornithological Dictionary in

1802, says : " We have seen it rarely on the coast of Wales near Tenbeigh (*sic*), where a few breed annually; but nowhere else that we could find from thence to St. David's." None now breed south of the Isle of Man, and the bird has deserted Anglesea, and the neighbourhood of Llandudno, in North Wales, where it was reported to occur by Pennant, equally with our coasts. There is no specimen of a Pembrokeshire Black Guillemot now existing that we know of in any collection; nor is the bird, in virtue of a chance straggler floated to our shores, at the present day included in any list of the birds of the county. The Black Guillemot is very abundant off the north-west of Scotland, and is a species that does not wander far from its habitat; specimens reported from the Bristol or English Channels are few and far between.]

LITTLE AUK, *Mergulus alle*.—An occasional winter visitor. The Little Auk is the smallest in size of the cliff birds, and does not belong to our coasts, to which it is only a visitor in the winter, in very limited numbers, from Polar Seas, where it resides in immense multitudes. It is not unfrequently picked up dead upon the shore, or at some distance inland, after rough weather. Sir Hugh Owen shot a Little Auk in Goodwick Bay in 1880, where he has often seen it, and describes it as having a very musical loud whistle, and as being always tame. He has also seen it and heard its whistling note in early autumn. It is included by Mr. Mathias in his list.

PUFFIN, *Fratercula arctica*.—Resident. This is the last of the Pembrokeshire birds that is left to us to describe, and, in the summer time, is by far the most numerous on the whole list; we do not believe that we should exaggerate were we to say that the Puffins, in number, are then equal to all the other birds in the county added together! They occur on almost every station that is visited by the other cliff birds, wherever there are facilities for making their burrows, but like some other species, have their favourite quarters, being found on Ramsey only on

the north end of the island, while the Razorbills and Guillemots chiefly occupy its western and south-western cliffs, and the large rocks standing out in the water to the south. On Skomer, where their numbers are marvellous, the Puffins are distributed all over the island, and there is scarcely a yard of ground free from them, so that we were both surprised and amused by coming on them at the least expected places. In walking over the island every now and again, our feet would slip through into a Puffin's burrow, and sometimes, we fear, we sadly decomposed the bird sitting within upon her egg. The Rev. C. M. Phelps has remarked that the eggs of the Skomer Puffins are very fine, and, in some cases, unusually richly marked. The same characteristic would seem to apply to the Puffins eggs from any part of the Welsh coast, as some we obtained from the neighbourhood of Barmouth, in North Wales, are very handsome, being of a pure white, and sparsely dotted over with grey patches. The average Puffin egg is a dirty white egg, far from ornamental in one's cabinet. We had frequently been informed by friends of the vast numbers of Puffins that inhabited Skomer, but from their descriptions we were but little prepared for what we actually saw. As our boat approached the island we first came upon an immense mass of birds upon the water, that proved to be acre upon acre of Puffins; flocks were continually arriving, and others leaving the main body, and all over the surface of the sea there were smaller flocks. As we drew near to the shore we found the cliffs in front of us so thickly covered by Puffins as to look as if they were sprinkled with snow, and the air was thick with single Puffins flying off the water with ribbands of fish hanging from their mandibles, on their way to feed the young in their burrows. The birds were ridiculously tame, and when we landed, and were close to them, took but slight heed of us, only fixing their little round eyes upon us, and seeming to sit a little more upright upon the rocks. But there was a continual movement amongst them of those arriving and departing, and sitting down among the fern we for some time watched the wonderful scene, and as we remained

quiet some of the birds were emboldened to alight almost within arm's reach, and presently we saw a pure white Puffin, white all over, save for the wings that were black, fly within a few feet of us. In Mr. Vaughan Davies' house there is preserved a beautiful specimen of a perfect albino Puffin that had been obtained on the island, and we were informed that varieties are rare, and that this was the only albino that had ever occurred. Mr. Dix relates that on Caldy Island, where Puffins are also numerous, there was in his time a very cruel custom that we heartily trust has been put a stop to by the Sea Birds' Preservation Act, viz., the men and boys of Tenby used to slaughter the Puffins wholesale on Whit Monday, and adds: "It is as much an institution with them as May Day with the sweeps." We are told that on Grasholm the Puffins are a week or ten days later in nesting than they are on Skomer and Ramsey. In the winter the Puffins disappear from all the islands, and are distributed over the seas. They do not appear to go far up the Bristol Channel, as the Guillemots and Razor-bills do, as we have never met with any, and there are but few instances of stragglers having been noticed on the Somerset coasts. The singular fact is reported from one of the Light Houses at the entrance to Milford Haven that Puffins strike against the light annually at the beginning of September, and do not do so at any other season of the year. At Caldy they visit the Light House in the spring; twenty occurred there at 6 a.m. on March 4, 1886.

ADDENDUM.

CRANE, *Grus communis*.—Mr. H. W. Evans, of Harbour House, Solva, possesses a very fine example, an adult in full plumage, of this rare occasional visitor to the British Islands, where, in ancient days, it was a regular summer migrant to the eastern counties. This specimen was captured April 28, 1893, on Vachelich Farm, between Solva and St. David's, and we have been informed by Mr. Evans that it weighed $11\frac{3}{4}$ lbs. in the meat, and measured 6 ft. 9 in. across the extended wings from tip to tip. "It had been seen on Clegyr Issaf Farm some days before, and was in grand plumage and condition." Mr. Evans justly regards this beautiful bird as the prize in his collection of British birds.

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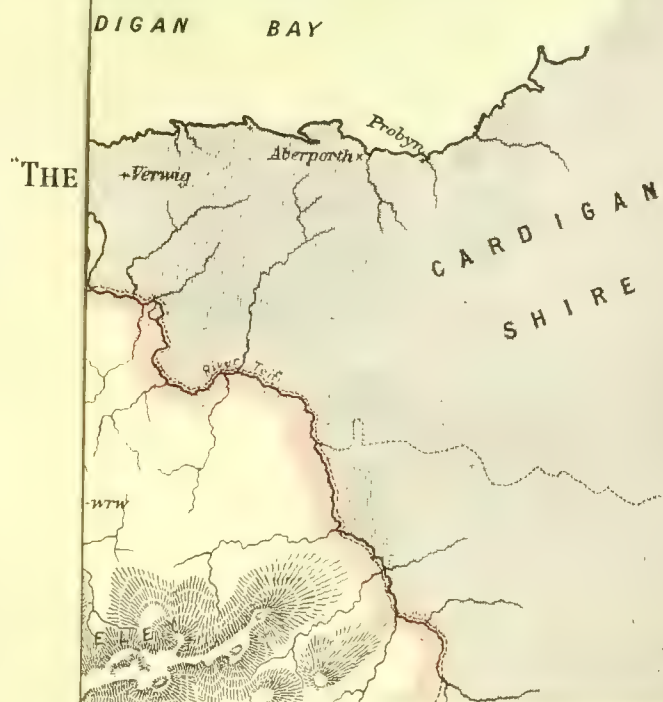
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Map of
PEMBROKE SHIRE,
 to illustrate
 "THE BIRDS OF PEMBROKESHIRE AND ITS ISLANDS,"
 BY
 The Rev^d Murray A. Mathew, M.A., F.L.S.





This is a historical map of the south-western coast of Wales. The map is oriented with North at the top. The central feature is the **ST. GEORGE'S CHANNEL**, which separates the Welsh coast from the **IRISH LAND** to the west. To the east of the channel is **CARDIGAN BAY**. The map shows several shires: **CARMARVONSHIRE** at the top, **MERIONETH SHIRE** to the northeast, **CARDIGANSHIRE** along the coast, and **CAERMARTHENSHIRE** and **PEMBROKE SHIRE** to the south. Key locations marked include **Cardigan**, **Barmouth**, **St. David's Bay**, and **St. George's Bay**. The map also shows various castles and fortifications, such as **Castell y Ffynnon** and **Castell y Ddraig**. The title **Map shewing** is located at the bottom left corner.

THE LIGHTHOUSES AND ISLANDS OFF THE COAST AND CONTIGUOUS TO
PEMBROKE SHIRE,

"THE BIRDS OF PEMBROKE SHIRE AND ITS ISLANDS."

The Rev^d Murray A. Mathew, M.A., F.L.S.

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